

SF 10.3.1.2
1003

**WORKPLAN FOR
ASBESTOS ABATEMENT AT THE
MINE OPERATIONS AREA**

Presented to:

**BUNKER LIMITED PARTNERSHIP
135 East Cameron Avenue
Kellogg, Idaho 83837**

Attn: Mr. Frank J. Breidt, Vice President

Prepared by:

**RUST REMEDIAL SERVICES INC.
4245 Technology Drive
Fremont, California 94538
(510) 249-4688**

September 15, 1994

RRS Project # 94-9314

**RECEIVED
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USEPA SF



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10.3.1.2

**WORK PLAN FOR
ASBESTOS ABATEMENT AT THE
MINE OPERATIONS AREA**

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1.0 INTRODUCTION

This project Asbestos Abatement Health and Safety Plan (AAHSP) developed by Specialty Asbestos, Inc. (SAI), takes into account all current OSHA, USEPA, and SAI's current operating procedures. This plan is site specific and is outlined as it pertains to this project.

2.0 STAFF AND TRAINING

SAI's work force will consist of a project manager, site superintendent, and work area foremen as needed. The site superintendent will also be the safety officer for this project. Crew size will be determined by the schedule needed to meet the project's overall completion date and requirements of the General Contractors (GCs) work schedule. The site superintendent will be on site at all times during abatement removal.

All employees of SAI will be trained according to all OSHA and EPA regulations in the handling and removal of asbestos, and will be required to have a 40-hour HAZWOPER course. All supervisors will have a current "supervisor" training certificate from a AHERA accredited training provider.

Medical surveillance of all employees will be in accordance with OSHA regulation 29 CFR 1926.58/1910.120. All employees will have a medical exam before being allowed to work on this project. In addition all employees on this project will have biological testing (blood) for lead levels both before and after this project, to check for any exposure to lead in excess of OSHA standards.

3.0 MOBILIZATION

After notice to proceed from the GC, SAI will mobilize to the job site with materials and equipment to complete removal and disposal requirements. These tools will include an office trailer and decontamination unit to be placed on the work site as determined at the pre-con meeting.

All work areas will be demarcated using rope and/or barrier tape at a distance of 25 feet from the removal areas and posted with OSHA required asbestos danger signs.

4.0 OPERATIONS

All non friable asbestos containing material will be removed using wetting and hand methods. CAB roofing and siding will be removed, taking special care to keep breakage to a minimum. After being removed, this material will be placed in a 6-mil poly lined truck for transportation to the disposal site. All non-friable roofing material (coated metal, tar paper, rolled roofing), will be removed using hand spuds and placed into a lined truck for disposal.

Friable ACM pipe insulation will be removed using the glove bag method for all pipe >24", according to Appendix J, OSHA regulations. Pipe insulation <4" will first be wrapped in a double layer of 6-mil poly, then sections of ACM will be removed using glovebag methods at intervals of not less than 8' or wherever needed. Pipe will then be tape sealed at each end and cut at these cleaned locations. These lengths of pipe will then be placed in the disposal van for disposal.

Debris removal at the silo building and the crib retaining wall will be by wetting material and then placing into 6-mil disposal bags. Should the ambient fiber counts exceed .1 f/cc the abatement crew will stop work and place a temporary poly enclosure around the work area. SAI will then place engineering controls inside the containment to provide 4 air changes per hour. After all loose material is picked up, work area will be inspected and a clearance air sample will be taken in a non aggressive manner. After clearance, all poly will be removed and bagged for disposal.

5.0 PERSONNEL PROTECTIVE EQUIPMENT

Respiratory protection for abatement activities will be in accordance with SAI's respirator program (minimum 1/2 face negative pressure respirator with HEPA filters). Respirators will be worn at all times while within the work areas.

Additional protective equipment will include full body disposable suits with head covers, and workers will be required to wear same at all times within the work areas during abatement activities. Workers will also be provided with steel toe rubber boots, work gloves and hard hat (where required).

While working on roofs, manlifts, or scissors lifts all employees will be required to wear a OSHA approved safety belt/harness. When employees are within ten feet of the edge of roof or when removing the CAB underlayment panels on the roof, they will be connected by a OSHA approved lanyard to a safety line of no less than 3000 lb breaking strength, with a limited free fall distance of no more than 5 feet. All employees required to wear a safety belt/harness will be required to read and sign SAI's fall protection plan for this site.

6.0 DECONTAMINATION

A central decontamination unit will be located next to the job site office trailer. For non-friable ACM work areas, a single disposable suit will be utilized. For friable and glove bag work, as well as debris pickup, workers will utilize a double suit. Workers will don a double suit or single suit as needed for their work area, respirator, and foot protection, and a hard hat if required, before entering their respective work areas.

Any time an employee exits from the work area they will remove all the gross material from suits, remove 1st outer suit (if wearing), and dispose of as contaminated waste. With their respirator still on, employees will then go to the central decon unit. Decon will

be accomplished by entering the airlock to dirty room, removing suit, placing into a container for disposal. Workers will pass through a second airlock into the shower, where they will decon their respirator before removing. They will then thoroughly shower with special attention to hands and hair. After showering, they will pass through another airlock into the clean room to don street clothes. Showering will be mandatory for all employees working on removal activities.

7.0 AIR MONITORING

Air/monitoring during this project will be done by a SAI competent supervisor and will consist of personal and area samples. Area samples will be conducted inside the work zone at outer limits for glove bag work or outside of work zone (downwind) for nonfriable ACM. The following are maximum levels and would cause corrective action if exceeded.

- A) During removal of non-friable ACM-no containment; ambient air counts of less than .1 f/cc.
- B) During glovebag work on friable ACM and/or debris pickup; not to exceed .1 f/cc.
- C) Inside a containment; fiber count shall not exceed 1.0 f/cc.

If any of the above fiber counts are exceeded, work will stop in the affected work area and work practices will be readjusted. Should counts exceed the maximum, a containment will be placed around the work area with necessary engineering controls.

In addition to air monitoring for asbestos, several "at random" personal samples for lead in air will be taken during the work (in different work areas). This will allow a determination as to whether additional respiratory protection or controls might be needed to protect workers from lead exposure in excess of the OSHA limits.

8.0 TRANSPORTATION

Asbestos disposal and transportation will be done by SAI's personnel. Transportation will be a poly lined dump truck, covered for all non-friable ACM. All friable ACM will either be double bagged or double wrapped in 6-mil plastic. The truck will be covered with a tarp between work shifts and during transportation to the disposal site at the West Canyon lay down area. Slag from the Slag Borrow Area will be used to cover the asbestos daily. A final layer of a minimum of 6 inches will be placed over the entire area at the end of asbestos removal.

9.0 DEMOBILIZATION

Demobilization will be accomplished after the *entire work areas are inspected by the GC representative and SAs superintendent* and all areas are cleared of ACM material per contract specifications. All equipment will then be decontaminated and removed from the project site.

17-11#1



Environmental Systems

A Subsidiary of Control Resource Industries, Inc.

670 Mariner Drive
Michigan City, Indiana 46360
Phone: (219) 872-5521

September 3, 1987

Specialty Asbestos
2626 East Trent
Spokane, WA 99202

Attention: Ron

Dear Ron:

The following is the letter which we send out along with a completed decal to the customer wishing for a certification of our CRSI 600 L unit:

"This letter certifies that the air filtration equipment produced by CONTROL RESOURCE SYSTEMS, INC., i.e. "CRSI 600 L" is manufactured in accordance with American National Standard Z9.2 1979 "Fundamentals Governing the Design and Operation of Local Exhaust Systems", and Federal Standard 209-B for Class 100 Air.

If you have any questions or require any additional information please do not hesitate to call."

Also enclosed please find a photo copy of the performance test decal. Should you require further information or a completed verification of a certain unit please feel free to contact us.

Sincerely,

CONTROL RESOURCE SYSTEMS, INC.

Kevin Perer

KB:tsc

Enclosure

HAKO **Minuteman, Inc.**

111 South Rohlwing Road, Addison, Illinois 60101-4244 USA • Phone (708) 627-6900 Telex 910-991-3992

June 8, 1990

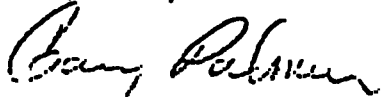
RE: 800 Series H.E.P.A. Equipped Vacuums

To Whom It May Concern:

We wish to take this opportunity to advise you that all our 800 Series H.E.P.A. filter vacuums, including the Model X839 Asbestos Vacuum, meet the ANSI 29.2 standards.

All our H.E.P.A. filters are DOP tested in accordance with MIL-STD 282, and are registered and labeled on each individual unit by the manufacturer. All the filters we use meet, and in most cases, exceed the minimum standard of 99.99% efficiency for .12 micrometer particles.

Sincerely,



Gary Palmer
Vice President,
Engineering

GP:jrw



CONTROL RESOURCE SYSTEMS, INC.
"Worldwide Environmental Supplies"
"Call Toll Free: 1-800-ASHBESTQ"

Product News
Asbestos Abatement Supplies and Equipment

BULLETIN BULLETIN BULLETIN BULLETIN BULLETIN

SUBJECT: "HOG" 2000

RELEASE: IMMEDIATE

Dear Asbestos Professional:

It has recently come to our attention that some manufacturers and distributors are "cloning" the "HOG" 2000 Negative Air Pressure System. These "HOG" imposters are making false claims as to their products performance and comparing these "clones" to the "HOG" 2000. There are ridiculous price analogies with inflated specifications and filtration capabilities that border on false advertising.

The purpose of this Bulletin is to set the record straight and challenge these imposters. The trademarked and patented "HOG" 2000 system represents "state of the art" engineering in air filtration and negative air pressure. Any copy of this system is an outright infringement of our legal rights and is being swiftly dealt with. Secondly, the "HOG" 2000 is the "Rolls Royce" of air filtration which has been proven time and time again. In a recent comparative study performed for Harvard University, only the "HOG" 2000 passed all stringent testing requirements.

When it comes to air quality control and those subsequent liabilities, don't take the risk by being lured in by an imposter. Our equipment is certified under standards set by (ANSI) American National Standards Institute Z9.2, (ASHRAE) American Society of Heating, Refrigeration & Air Conditioning Engineers, and Federal Standard 209B for Class 100 Air. Don't gamble with safety! Put your future in quality equipment and share the confidence of thousands of satisfied users. Call your CRSI Representative today before being a victim of "imposter false advertising".

Sincerely,

CONTROL RESOURCE SYSTEMS, INC.

P.S. Don't forget our complete line of asbestos abatement supplies and equipment, also sold at competitive prices.

SPECIALTY ASBESTOS, INC.

E. 2626 TRENT

SPOKANE, WASHINGTON 99202

(509) 535-0666

SPECIAL1147LP

WAC REGULATION 296-62-07721 5 (A-D)

ANNUAL TRAINING COURSE

I HAVE THOROUGHLY READ THE EMPLOYEE TRAINING MANUAL AND
UNDERSTAND THE TECHNIQUES AND HAZARDS INVOLVED IN THE
ABATEMENT PROCEDURES.

SIGNATURE

DATE

Issued by DEPARTMENT OF LABOR & INDUSTRIES
CERTIFIED AS PROVIDED BY LAW AS A:
ASBESTOS WORKER



(b) (6)

JONES, CLINTON E

(b) (6)

SPOKANE

WA 99207

SPECIALTY ASBESTOS, INC.

E. 2626 TRENT

SPOKANE, WASHINGTON 99202

(509) 535-0665

SPECIAL147LP

WAC REGULATION 296-62-07721 5 (A-D)

ANNUAL TRAINING COURSE

**I HAVE THOROUGHLY READ THE EMPLOYEE TRAINING MANUAL AND
UNDERSTAND THE TECHNIQUES AND HAZARDS INVOLVED IN THE
ABATEMENT PROCEDURES.**

SIGNATURE

DATE

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

**CERTIFIED WORKER FOR FULL-SCALE
ASBESTOS ABATEMENT**

(b) (6)

TIMOTHY C. LEETVICH
(b) (6)

SPECIALTY ASBESTOS, INC.

E. 2626 TRENT

SPOKANE, WASHINGTON 99202

(509) 535-0666

SPECIAL147LP

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ANNUAL TRAINING COURSE

I HAVE THOROUGHLY READ THE EMPLOYEE TRAINING MANUAL AND UNDERSTAND THE TECHNIQUES AND HAZARDS INVOLVED IN THE ABATEMENT PROCEDURES.

SIGNATURE

DATE

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFIED SUPERVISOR FOR FULL-SCALE
ASBESTOS ABATEMENT

(b) (6)

NAME

JESSE R. HASK

(b) (6)

SPECIALTY ASBESTOS, INC.

E. 2626 TRENT

SPOKANE, WASHINGTON 99202

(509) 535-0666

SPECIAL1147LP

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ABATEMENT PROCEDURES.

SIGNATURE

DATE

Issued by DEPARTMENT OF LABOR & INDUSTRIES
CERTIFIED AS PROVIDED BY LAW AS A:
ASBESTOS WORKER



(b) (6)

THOMSON, DARREL D
(b) (6)

POST FALLS

ID 83854

SPECIALTY ASBESTOS, INC.

E. 2626 TRENT

SPOKANE, WASHINGTON 99202

(509) 535-0666

SPECIAL147LP

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ABATEMENT PROCEDURES.

SIGNATURE

DATE

Issued by DEPARTMENT OF LABOR & INDUSTRIES
CERTIFIED AS PROVIDED BY LAW AS A:
ASBESTOS SUPERVISOR



CERTIFICATE NUMBER

EXPIRATION DATE

(b) (6)

THOMSON, LOWELL R

(b) (6)

POST FALLS

ID 83854

SPECIALTY ASBESTOS, INC.

E. 2626 TRENT

SPOKANE, WASHINGTON 99202

(509) 535-0666

SPECIAL1147LP

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SIGNATURE

DATE

Issued by DEPARTMENT OF LABOR & INDUSTRIES

CERTIFIED AS PROVIDED BY LAW AS A:

ASBESTOS WORKER



CERTIFICATE NUMBER
(b) (6)

EXPIRATION DATE

THOMSON, LOWELL

(b) (6)

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ID 83854

SPECIALTY ASBESTOS, INC.

E. 2626 TRENT

SPOKANE, WASHINGTON 99202

(509) 535-0666

SPECIAL1147LP

WAC REGULATION 296-62-07721 5 (A-D)

ANNUAL TRAINING COURSE

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SIGNATURE

DATE

Issued by DEPARTMENT OF LABOR & INDUSTRIES

CERTIFIED AS PROVIDED BY LAW AS A

ASBESTOS WORKER

CERTIFICATE NUMBER

EXPIRATION DATE

(b) (6)

TREAT, EVERTT C

(b) (6)

POST FALLS

ID 83854

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6) Date Examined: 8/18/93

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature:

Date:

History: Working in Specialty X17 yrs 7-8 yrs removed.

Pulmonary:

No

Yes

Asthma

No

Yes

Bronchitis

No

Yes

Cough

No

Yes

Hemoptysis

No

Yes

Recent Respiratory Infection

No

Yes

Shortness of Breath

Cardiovascular:

No

Yes

Chest Pain

Ears:

No

Yes

Perforated Ear Drums

Smoker:

No

Yes

#packs/day:

#years

Asbestos Exposure:

No

Yes

#years since first exposure:

Examination: Height: 74" Weight: 239 B/P: 130/80 Pulse: 62 + reg

Ears:

Normal

nmf

Abnormal

abr

TMs intact

nmf

abn

Canal clear

Mouth:

nmf

abn

Clear / No obstruction

Neck:

nmf

abn

Supple / No mass / No nodes

CV:

nmf

abn

Reg Rate / No murmur

Abdomen:

nmf

abn

No mass / No organomegaly

PFTs:

☒ Normal

☐ Abnormal

☐ Unacceptable

☐ No change

CXR:

☐ Normal

☐ Abnormal

☐ No change

Impressions:

Occupational Medicine Associates

100 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

(b) (6)

Name

Date Examined: 7/1/94

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Wanda Alantshyn
Signature:

7/1/94
Date:

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name (b) (6) _____ Date Examined: 9-9-93

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature:

Date:

9/9/93

Occupational Medicine Associates

40 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6)

Date Examined: 11/12/93

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature: *[Handwritten Signature]*

Date: 11/12/93

ROOSEVELT MEDICAL CENTER

18300 8th Avenue Northeast
Seattle, Washington 98115
Phone 527-7500

Family Medicine

JOHN L'FLEMING, M.D.
ALF WOOD NG, M.D.
JAMES C. COGHLIN, M.D.
KENNETH B. LAUREN, M.D.
MARK S. MLCAR, M.D.
GAYLE PALMER, M.D.

PLEASE NOTE: PRESCRIPTIONS WILL BE REFILLED ONLY DURING REGULAR OFFICE HOURS.

(b) (6)



LABEL ALL MEDICINE
REFILL ()



REG. _____

Substitution Permitted

M.D. _____

Dispense as Written

M.D. _____

Occupational Medicine Associates

300 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6) _____ Date Examined: 5/16/94

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature: TPM

5/16/94
Date:

Occupational Medicine Associates

40 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

(b) (6)

Respiratory Examination and Recommendations

Name

Date Examined: 6.2.94

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature:

Date:

6/2/94

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6) Date Examined: 11/10/93

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature: *Robert George MD*

Date: 11/10/93

History:

Pulmonary:

Cardiovascular:

Ears:

Smoker:

Asbestos Exposure

Examination: Height:

Ears:

nrl

abn

Canal clear

Mouth:

nrl

abn

Clear / No obstruction

Neck:

nrl

abn

Supple / No mass / No nodes

CV:

nrl

abn

Reg Rate / No murmur

Abdomen:

nrl

abn

No mass / No organomegaly

PFTs: ☒ Normal ☐ Abnormal ☐ Unacceptable ☐ No change

CXR: ☐ Normal ☐ Abnormal ☐ No change

Impressions:

(b) (6)

Robert George MD

Occupational Medicine Associates

South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6)

Date Examined: 8-10-94

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Charles R. [Signature]
Signature:

8-10-94
Date:

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6) Date Examined: 1-21-94

Recommendations:

Yes.
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature:

Date:

Occupational Medicine Associates^{1 2}

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6) Date Examined: 3-22-04

Recommendations:

Yes	<input checked="" type="checkbox"/>
Yes	<input checked="" type="checkbox"/>

No	<input type="checkbox"/>
No	<input type="checkbox"/>

O. K. for Respirator Use

O. K. for Asbestos Work

Signature: Paul Berger MD

Date: 3/22/04

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Report of Medical Examination

Name: (b) (6) Date Examined: 3/22/94
Job for which person examined: insurance agent

BASED ON ALL THE INFORMATION AVAILABLE TO ME. IT IS MY OPINION THAT THE ABOVE NAMED PERSON HAS A MEDICAL CONDITION (S) WHICH MAY:

1. Endanger others (including employees, general public, patients, etc.) with whom the applicant may be expected to have contact in the regular course of employment.
2. Endanger themselves in the performance of their duties.
3. Be aggravated by their work exposures or activities.
4. Interfere with performance.
5. Other: _____
- ☒ 6. None of the above.

AND ON THE BASIS OF WHICH I RECOMMEND:

- ☒ 1. No restrictions in work assignments for above job.
2. Restricted activities: _____

3. Limited exposure: _____

4. Special protective measures: _____

- ☒ 5. Other: OK for Asbestos & respirator

C. J. Ranting MD
Signature

3/22/94
Date

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6) Date Examined: 2-28-91

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature:

T. Rempel, MD

Date:

2-28-91

Post-It™ brand fax transmittal memo 7671		# of pages: 1
To: Sharon	From: P. Rempel	
Co: Specialty, Inc.	Co: P. Rempel	
Dept:	Phone #	
Fax # 536-9672	Fax # 535-7002	

OCCUPATIONAL MEDICINE ASSOCIATES

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6)

Date Examined: 7-6-94

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature:

Robert E. Jensen

Date:

7/6/94

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6) Date Examined: 5/6/94

Recommendations:

☒ Yes
☒ Yes

☐ No
☐ No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature: *[Handwritten Signature]*

5/6/94
Date:

History:

Pulmonary:

Cardiovascular:

Ears:

Smoker:

Asbestos Exposure:

Examination: Height:

	Normal	Abnormal	
Ears:	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> abn	TMs intact
	<input type="checkbox"/> nrm	<input type="checkbox"/> abn	Canal clear
Mouth:	<input checked="" type="checkbox"/> nrm	<input type="checkbox"/> abn	Clear / No obstruction
Neck:	<input checked="" type="checkbox"/> nrm	<input type="checkbox"/> abn	Supple / No mass / No nodes
CV:	<input checked="" type="checkbox"/> nrm	<input type="checkbox"/> abn	Reg Rate / No murmur
Abdomen:	<input checked="" type="checkbox"/> nrm	<input type="checkbox"/> abn	No mass / No organomegaly
PFTs:	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Unacceptable
			<input type="checkbox"/> No change

CXR: ☐ Normal ☐ Abnormal ☐ No change

Impressions: *Normal Exam*

Sut 5-9-94

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

(b) (6)
Name: _____ Date Examined: 5/9/94

Recommendations:

<input checked="" type="checkbox"/> Yes
<input checked="" type="checkbox"/> No

<input type="checkbox"/> Yes
<input type="checkbox"/> No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature: _____

Date: _____

History: No health problems ; dpt

Pulmonary:

(b) (6)

Cardiovascular

Ears:

Smoker:

Asbestos Exposure

Examination: H

	Normal	Abnormal	
Ears:	<input checked="" type="checkbox"/> nml	<input type="checkbox"/> abn	TMs intact
	<input checked="" type="checkbox"/> nml	<input type="checkbox"/> abn	Canal clear
Mouth:	<input checked="" type="checkbox"/> nml	<input type="checkbox"/> abn	Clear / No obstruction
Neck:	<input checked="" type="checkbox"/> nml	<input type="checkbox"/> abn	Supple / No mass / No nodes
CV:	<input checked="" type="checkbox"/> nml	<input type="checkbox"/> abn	Reg Rate / No murmur
Abdomen:	<input checked="" type="checkbox"/> nml	<input type="checkbox"/> abn	No mass / No organomegaly
PFTs:	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Unacceptable
			<input type="checkbox"/> No change

CXR: ☒ Normal ☐ Abnormal ☐ No change

Impressions: Normal exam

Sub 5-9-94

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

(b) (6)

Respiratory Examination and Recommendations

Name

Date Examined:

2-16-94

Recommendations:

<input checked="" type="checkbox"/> Yes
<input checked="" type="checkbox"/> No

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature:

T. Rangel, MD

Date:

2/16/94

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

(b) (6)

Examination and Recommendations

Name

SL

Date Examined: 2-16-94

Recommendations:

Yes
Yes

No

O. K. for Respirator Use

No

O. K. for Asbestos Work

Signature:

T. Rangel, MD

Date:

2/16/94

History:

(b) (6)

Pul

Car

Ear

Sm

Ast

Examina

Ears:

Normal

abn

TMs intact

Normal

abn

Canal clear

Mouth:

Normal

abn

Clear / No obstruction

Neck:

Normal

abn

Supple / No mass / No nodes

CV:

Normal

abn

Reg Rate / No murmur

Abdomen:

Normal

abn

No mass / No organomegaly

PFTs:

☒ Normal

☐ Abnormal

☐ Unacceptable

☐ No change

CXR:

☒ Normal

☐ Abnormal

☐ No change

3/92 H Ct D.

Impressions:

Normal Exam

Post-It brand fax transmittal memo 7671

of pages: 1

To: Sharon	From: Tami
Co: Specialty/Asbestos	Co: OMA
Dept:	Phone: 535-5555
Fax: 535-9172	Fax:

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6) Date Examined: 8-17-93

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Cancelled to quit smoking

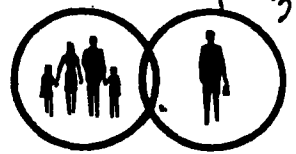
Dr. A. J. MAD, M.D.

Signature:

Date:

8-17-93

Kennewick Family Medicine, Inc., P.S.



February 25, 1994

Specialty Asbestos Incorporated
East 2626 Trent
Spokane, WA 99202

TO WHOM IT MAY CONCERN:

(b) (6)

Sincerely,


George Stachecki, M.D.

GS/jkr

MEDICAL STAFF

H. Matt Smith, M.D.
George P. Stachecki, M.D.
Wayne M. Kohan, M.D.
John G. Dockum, M.D.

ADMINISTRATIVE

David O. Little

Occupational Medicine Associates

10 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: _____

Date Examined: 6-16-94

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

Signature: _____

Date: 6-16-94

History: _____

Pulmonary:

Cardiovascular:

Ears:

Smoker:

Asbestos Exposure:

Examination: Height:

Ears:

☒ nml

☐ abn

TMs intact

☒ nml

☐ abn

Canal clear

Mouth:

☒ nml

☐ abn

Clear / No obstruction

Neck:

☒ nml

☐ abn

Supple / No mass / No nodes

CV:

☒ nml

☐ abn

Reg Rate / No murmur

Abdomen:

☒ nml

☐ abn

No mass / No organomegaly

PFTs:

☒ Normal

☐ Abnormal

☐ Unacceptable

☐ No change

CXR:

☐ Normal

☐ Abnormal

☐ No change

Impressions: Normal

Occupational Medicine Associates

140 South Arthur, Suite 410 Spokane, Washington 99202 Phone: (509) 535-5555 Fax: (509) 535-7002

Respiratory Examination and Recommendations

Name: (b) (6) Date Examined: 3/30/94

Recommendations:

Yes
Yes

No
No

O. K. for Respirator Use

O. K. for Asbestos Work

consider phlebo

T. Ruyal, M

Signature:

3/30/94
Date:

RESPIRATOR PROGRAM

4 # wrlT

SPECIALTY ASBESTOS, INC.

E. 2626 TRENT

SPOKANE, WASHINGTON 99202

(509) 535-0666

SPECIAL1147LP

RESPIRATORY PROTECTION PROGRAM STANDARD OPERATING PROCEDURES

The standard procedure for determining the respirator wearer's psychological and physiological limitations will be determined by the examining physician during the employee annual physical.

These determinations shall be the basis for position selection. As an added factor, a quantitative fit test will be given to the employee to help determine respirator compatibility.

SPECIALTY ASBESTOS, INC.

E. 2020 TRENT

SPOKANE, WASHINGTON 83702

(509) 535-0666

SPECIAL1147LP

RESPIRATORY PROTECTION PROGRAM STANDARD OPERATING PROCEDURES

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CORPORATE SAFETY AND HEALTH PROGRAM

SUBJECT: RESPIRATORY PROTECTION PROGRAM

1.0 Purpose

This program establishes uniform guidelines for complying with all federal and state requirements, and provides company-wide procedures for the proper selection, use and care of respiratory protective equipment.

2.0 Scope

This program applies to all Company operations.

3.0 Policy

Every consideration will be given to the use of effective engineering controls to eliminate or reduce employee exposure to toxic materials to below any Permissible Exposure limits (PEL's); however, when feasible engineering controls are not effective in controlling toxic substances, appropriate respiratory protective equipment will be provided by the Company at no cost to the employee.

Respiratory protective equipment will be appropriate for the hazardous material(s) involved and the extent and nature of the work requirements and conditions.

Employees required to use respiratory protective equipment because of exposure to toxic materials will do so as a condition of employment. Employees required to use respirators will be properly fitted, appropriately tested, medically screened, and thoroughly trained in their use.

4.0 Codes and Regulations

Those standards governing the development of this program include but are not limited to the following:

Asbestos Regulations-Construction

Title 29, Part 1926, Section 58 of the Code of Federal Regulations.

Respiratory Protection

Title 29, Part 1910, Section 191.101 of the Code of Federal Regulations.

NIOSH/MSHA Approvals for Respirators

Title 30, Part II of the Code of Federal Regulations

American National Standards Institute (ANSI)

American National Standard Practices for Respiratory Protection, Z88.2-1980.

Respiratory Protection

Washington Administrative Code WAC 296-62-071.

Asbestos Standard

Washington Administrative Code WAC 296-62-077.

5.0 Program Administrator

LOWELL THOMSON is authorized and responsible for the administration of this respirator program.

6.0 Equipment Approval

Only respirators from among those approved as being acceptable for use by the Mine Safety and Health Administration (MSHA) or by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part II will be purchased and used.

7.0 Respirator Selection

The selection of a proper respirator for any given situation shall require consideration of the following factors:

A. Nature of Hazard. The following factors concerning the nature of the hazard requiring the use of respirators shall be considered in respirator selection:

- (1) Type of hazard:
 - (a) Oxygen deficiency
 - (b) Contaminant
- (2) Physical properties
- (3) Chemical properties
- (4) Physiological effects on the body
- (5) Actual concentration of a toxic material.
 - (a) Average
 - (b) Peak

- (6) Established permissible time-weighted average or peak concentration of a toxic material.
- (7) Whether the hazard is an immediately-dangerous-to-life-or-health (IDLH) concentration of a toxic material.
- (8) Warning properties.

B. Initial Monitoring of Respiratory Hazard. Recognition and evaluation of the respiratory hazard [oxygen deficiency or contaminant(s)] shall be an essential part of selecting a respirator except in emergency or rescue operations. Initial monitoring of the respiratory hazard shall be carried out to obtain data needed for the selection of proper respiratory protection. The data should include:

- (1) Identification of the type of respiratory hazard:
 - (a) Oxygen deficiency
 - (b) Specific contaminant(s)
- (2) Nature of contaminant(s)
 - (a) Particulate matter
 - (b) Vapor(s) or gas(es)
- (3) Concentration of respiratory hazard

C. Characteristics of Hazardous Operation or Process. The following factors concerning the hazardous operation or process shall be taken into account in selecting the proper respirator:

- (1) Operation or process characteristics
- (2) Work-area characteristics
- (3) Materials, including raw materials, end products, and byproducts (actual and potential)
- (4) Worker activities

Modification in the operation or process shall be taken into account, since this may change the hazard and hence require the selection of a different respirator.

D. Location of Hazardous Area. The location of the hazardous area with respect to a safe area having respirable air shall be considered in selecting a respirator, since this will permit planning for the escape of workers if an emergency occurs, for the entry of workers to perform maintenance duties, and for rescue operations.

E. Respirator Use Time Period. The period of time that a respirator must be worn is an important factor that shall be taken into account in selecting a respirator. Consideration shall be given to the type of respirator application, such as for routine, nonroutine, emergency, or rescue use. It would not be desirable, for example,

to select respirators that are heavy or that offer high resistance to breathing for routine wearing for many hours each day.

- F. **Worker Activity.** Worker activities and worker locations in hazardous areas shall be considered in selecting the proper respirator (for example, whether the worker is in the hazardous area continuously or intermittently during the work shift and whether the work rate is light, medium or heavy).
- G. **Respirator Characteristics, Capabilities and Limitations.** The physical characteristics, the functional capabilities, and the performance limitations of the various types of respirators shall be considered in selecting a respirator.

A respirator protection factor is a measure of the degree of protection provided by a respirator to a wearer. Multiplying either (1) the permissible time-weighted average concentration or the permissible ceiling concentration, whichever is applicable, by a protection factor assigned to a respirator gives the maximum concentration of the hazardous substance in which the respirator can be used. Limitations of filters, cartridges, and canisters also shall be considered.

- H. **Face Dimensions and Facepiece Sizes.** The wide range of face dimensions requires more than a single size of respirator facepiece to provide a proper fit to all respirator users. Therefore, respirator facepieces of more than one size shall be available in any respirator-selection involving respirators equipped with facepieces.
- I. **Employee Acceptance.** Employee acceptance of a particular respirators model within a class shall be considered in selecting a respirator since this may determine whether or not he wears the respirator properly. Acceptance factors to be considered include discomfort, breathing resistance, weight, and interference with vision of the work to be performed.

7.1 Respirator Selection for Asbestos Abatement.

For asbestos abatement activities, the company will select and provide, at no cost to the employee, the appropriate respirator as specified in Exhibit 1 and 2 and on-site air monitoring results, and will ensure the employee uses the respirator provided properly. Note: The company will provide a Powered Air-Purifying Respirator (PAPR) in lieu of any negative-pressure respirator whenever an employee chooses to use this type of respirator and it provides adequate protection.

8.0 Training

Respirators will only be issued to employees, subcontractors, or visitors who have received appropriate respirator training, medical clearance and who have passed an appropriate respirator fit-testing. The following training will be conducted as a part of each employees asbestos certification, renewal or annual training.

8.1 Training Program Content

The respirator training will include adequate discussion on the following topics:

- the characteristics of the contaminants**
- the health hazards of the contaminants, including the nature of diseases, routes of exposure and dose-response relationship**
- the classes and characteristics of respirator types**
- limitations of respirators**
- proper selection, inspection, donning, use, maintenance and storage procedure**
- methods for field checking of the facepiece-to-face seal (positive and negative pressure checks)**
- qualitative and quantitative fit-testing procedures**
- variability between field and laboratory protection factors**
- factors that alter respirator fit (e.g., eye glasses and facial hair)**
- the components of this respiratory protection program**
- the program administrator**
- requirements on oil lubricated reciprocating piston compressors for breathing air**
- emergency procedures**

8.2 Periodic Training

All employees required to use a respirator will be required to attend a refresher training course at least annually.

9.0 Issuance of Respirators

Whenever practical, respirators will be assigned to individual employees for their exclusive use.

9.1 Fit Testing - General

All employees required to wear negative pressure respirators will be qualitatively fit-tested before the issuance of the respirator. The qualitative fit-test protocol in Exhibit 3 will be followed.

9.2

Fit-Testing - Asbestos Abatement

All employees required to wear half-face negative pressure respirators will be qualitatively fit tested according to the protocol outlined in Exhibit 3. All employees required to wear negative pressure full-face respirators or Type C supplied-air full-face respirators equipped with HEPA back-up will be quantitatively fit tested according to the fit-test protocol outlined in Exhibit 4.

9.3

Fit Testing Frequency

9.3.1

Qualitative Fit-Testing will be repeated every 6 months.

9.3.2

Qualitative and Quantitative Fit-Testing will be repeated immediately when the employee has a:

- weight change of 20 pounds or more;
- significant facial scarring in the area of the facepiece seal;
- significant dental changes; i.e., multiple extractions without prosthesis, or acquiring dentures;
- reconstructive or cosmetic surgery; or
- any other condition that may interfere with facepiece sealing.

9.4

Record Keeping

9.4.1

Qualitative fit-testing records will be documented on the Respirator Fit-Test Record (Exhibit 5) and maintained for three years.

9.4.2

Quantitative fit testing records will be documented on the Respirator Fit Factor Card (Exhibit 6) and records maintained for three years.

10.0

Policy on facial hair, contact lenses, and eye and face protective devices.

A negative pressure respirator, any self-contained breathing apparatus, or any respirator which is used in an atmosphere immediately dangerous to life or health (IDLH), equipped with a facepiece shall not be worn if facial hair comes between the sealing surface of the facepiece and the face or if facial hair interferes with valve function. The wearer of a respirator shall not be allowed to wear contact lenses if the risk of eye damage is increased by their use. If a spectacle, goggle, face shield, or welding helmet must be worn with a facepiece, it shall be worn so as not to adversely affect the seal of the facepiece to the face.

Respirator Care and Maintenance

Respirator maintenance will be performed on a regular schedule which ensures that each respirator wearer is provided with a respirator that is clean and in good operating condition.

Maintenance will include:

- washing, sanitizing, rinsing, and drying
- inspection for defects
- replacement of worn or deteriorated parts
- repairs
- storage to protect against dust, sunlight, excessive heat, extreme cold, excessive moisture, damaging chemicals, and physical damage

11.1

Inspection of Respirators

Respiratory equipment will be inspected for defects before and after each use and during cleaning. The most common defects and corrective actions are listed below.

A. Rubber facepiece - check for:

- excessive dirt (clean all dirt from facepiece)
- cracks, tears, or holes (obtain new facepiece)
- distortion (allow facepiece to "sit" free from any constraints and see if distortion disappears, if not, obtain new facepieces)
- cracked, scratched loose-fitting lenses (contact manufacturer to see if replacement is possible; otherwise obtain new respirator)

B. Headstraps - check for:

- breaks or tears (replace headstraps)
- loss of elasticity (replace headstraps)
- broken or malfunctioning buckles or attachments (obtain new buckles)
- allowing the facepiece to slip (replace headstrap)

C. Inhalation valve, exhalation valve - check for:

- detergent residue, dust particles, or dirt on valve or valve seat (clean residue with soap and water)
- cracks, tears, or distortion in the valve material or valve seat (contact manufacturer for instructions)
- missing or defective valve cover (obtain new one from manufacturer)

D. Filter element(s) - check for:

- proper filter for the hazard
- missing or worn gaskets (contact manufacturer for replacement)
- worn threads - both filter and facepiece threads (replace filter or facepiece, whichever is applicable)
- cracks or dents in filter housing (replace filter), and missing or loose hose clamps (obtain new clamps)

E. Atmosphere-Supplying Respirators (Type C)

- breathing air quality
- breaks or kinks in air supply hose and fitting attachments (replace hose and/or fitting)
- tightness of connections
- proper setting of regulators and valves (consult manufacture's recommendations)
- correct operation of air-purifying elements and carbon monoxide (CO) and or high-temperature alarms

Note: The carbon monoxide alarm must be set to go off at or below 20 ppm and must be calibrated at least monthly.

11.1.1 See Exhibit 7 for the Respirator Inspection Check List.

11.2 Maintenance of Respirators

Respirators must be cleaned after each day's use and placed in a plastic bag or stored in another container provided for this purpose (zip-lock bags or clean coffee can). Do not leave them in the work area or hung on a wall.

Respirators should be completely cleaned and disinfected by carrying out the following procedures:

- A. Remove the cartridge from the respirator. Cartridge must never be washed or disinfected. Spent cartridges must be disposed of as contaminated waste.**
- B. Immerse the respirator in a warm soap and water solution. The respirator facepiece and parts may be scrubbed gently with a cloth or soft brush. Make sure that all foreign matter is removed from all surfaces of the rubber exhalation valve flap and plastic exhalation valve seats.**
- C. Disinfect with a commercial solution, alcohol wipes; or two tablespoons of bleach or one teaspoon of tincture of iodine per gallon of water.**

D. After washing and disinfecting the respirator, rinse it with warm water and then allow the respirator to air dry. Do not store the respirator with wet straps. Mildew will result. The facepiece, inhalation and exhalation valves must be in a normal position during storage to prevent the abnormal "set" of elastomer parts.

E. After the respirator is dry, install the cartridges.

Any malfunction on the respirator shall be reported to LOWELL THOMSON who will supply replacement parts.

Each employee assigned to use a respirator shall maintain and routinely inspect it before and after each use. Respirators will be inspected monthly by LOWELL THOMSON to assure that they are kept clean and in satisfactory working condition.

Note: Stretching and manipulating rubber or elastomer parts with a massaging action will keep them pliable and flexible and prevent them from taking a set during storage.

12.0 Medical Requirements

No respirator will be assigned to any employee of the Company unless the employee is physically and psychologically able to perform their job with the use of a respirator.

General Requirements

LOWELL THOMSON will use guidelines established by the consulting physician, Dr. STAFF to determine whether or not an employee may be assigned to a task requiring the use of a respirator. DEACONESS MED. CENTER

12.2 Medical Requirements for Asbestos Abatement

Employees engaged in asbestos abatement will be required to undergo medical surveillance, as follows:

- prior to the assignment of a negative pressure respirator (pulmonary function test minimum)
- for employees using positive pressure respirators, if the exposure to asbestos fibers is at or above the action level of 0.1 f/cc for thirty or more days per year. The medical surveillance will be provided within ten days following the thirtieth day of exposure.

12.3 Medical Records

The contents of the medical examination, as received from the physician will contain the following information:

- the physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to asbestos;
- any recommended limitations on the employee or upon the use of personal protective equipment such as clothing or respirators; and
- a statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions resulting from asbestos exposure that require further explanation or treatment.

12.3 Medical Privacy

The company will instruct the examining physician not to reveal to the company any specific findings or diagnosis unrelated to occupational exposure to asbestos or other toxic materials.

12.3.2 Record Availability

A copy of the physician's written opinion to the company will be available to all affected employees within thirty days from its receipt.

12.3.3 Record Keeping

All medical records will be kept by the company for the duration of an employee's employment plus thirty years.

13.0 Respirator Use Monitoring

LOWELL THOMSON will monitor the use of respirators in the field to ensure that they are worn properly. Personal air monitoring will also be performed to ensure the adequacy of protection against contaminants by the respirators.

14.0 Respirator Program Evaluation

LOWELL THOMSON will appraise the effectiveness of the respirator program so as to correct any defects, if any. The respirator program evaluation checklist in Exhibit 8 will be used.

14.1 Evaluation Frequency

The respirator program will be evaluated annually or more frequently, if needed.

DESCRIPTION OF WORK:

Each worker shall be instructed and trained in proper respiratory use and shall always wear a respirator properly fitted to the face in the work area from the start of any operation which may cause airborne asbestos fibers until the work area is completely decontaminated. Respiratory protection shall be appropriate for the fiber level encountered in the work place (except as noted below) or as required for other toxic or oxygen deficient situations encountered. During asbestos removal in the work area, full face, Type C, continuous flow, supplied air respiratory protection will be utilized by all workers.

STANDARDS:

Requirements of most stringent standards for respiratory protection shall be met. The following standards are to be considered minimum requirements regardless of fiber count in the work area:

OSHA - U.S. Department of Labor Occupational Safety and Health Administration, Safety and Health Standards (29 CFR 1910 Section 1910.134.)

CGA - Compressed Gas Association, Inc., New York, Pamphlet G-7 "Compressed Air for Human Respirator", and Specification G-7.1, "Commodity Specification for Air".

CSA - Canadian Standard Association, Rexdale, Ontario, Standard Z-180.1-1978
(or latest edition), "Compressed Breathing Air".

ANSI - American National Standard Practices for Respirator Protection, ANSI Z88.2-1980 (or latest edition).

AIR QUALITY FOR SUPPLIED AIR RESPIRATORY SYSTEMS:

Air used for breathing in Type "C" supplied air respiratory systems shall meet or exceed the standards set for C.G.A. type 1 (Gaseous Air Grade D).

Delivery:

Replacement parts, etc., not otherwise labeled by NIOSH or MSHA shall be delivered to the job site in manufacturer's containers.

EQUIPMENTS:

AIR PURIFYING RESPIRATORS:

Respirator Bodies shall be of half face or full face type with removable cartridges. Single use, disposable or quarter face respirators shall not be used. Full face respirators shall be equipped with a nose cup or other antifogging devices as would be appropriate for use in air temperature less than 32°F.

Filter Cartridges shall, at a minimum, be HEPA type filters labeled with NIOSH and MSHA Certification for "Radionuclides, Radon Daughters, Dust, Fumes, Mists including Asbestos-Containing Dusts and Mists" and color coded in accordance with ANSI Z328.2 (1980). In addition, an organic vapor cartridge section may be added, if required to solvents, etc., in use. In this case, color code and NIOSH/MSHA Certification.

SUPPLIED AIR RESPIRATOR SYSTEMS:

The equipment used shall be capable of producing air of the quality and volume required by the above referenced standards applied to the job site conditions and crew size. The standards above shall be augmented by provisions of the specification with the more stringent standard governing.

Face Piece and Hose shall be by the same manufacturer and shall be certified by NIOSH/MSHA as an approved Type "C" respirator assembly for continuous flow or pressure demand with a positive pressure face piece.

Back-up air supply shall be provided that is adequate to allow a minimum of one-half hour escape time for each six man crew. The one-half hour shall be based on the air supply being in use by the crew during the activity or if the air requirements of the particular respirator in use is greater.

Warning Device shall be located in the work area which will be clearly audible in all parts of the work area and can be heard above the noise level produced by equipment and work procedures in use. This warning device shall be used to warn of:

- Compressor shut down or other faults requiring use of back-up air supply.
- Carbon Monoxide (CO) levels in excess of 20 FPM/V over 8 hours.

Carbon Monoxide (CO) Monitor:

Carbon Monoxide (CO) levels shall be continually monitored and recorded. This monitor shall be placed in the air line between back-up air supply and workers and shall also sound an alarm as specified under "Warning Devices".

Compressor Shut Down:

The compressor shall automatically be shut down and the alarms sounded if any of the following occur:

- Carbon Monoxide (CO) concentrations exceed 20 PPM/V in the air line between the filter bank and back-up air supply.
- Compressor temperature exceeds normal operating range.

Compressor Monitor:

Shall be an electric motor. Compressor driven by gas or diesel engines shall not be used.

After Cooler:

An after cooler shall be provided at the entry to the filter system which is capable of reducing temperatures to outside ambient air temperatures.

Self Controlled Breathing Apparatus:

System configuration shall permit the recharging of 1/2 hour 2260 PSA SCBA cylinders.

EXECUTION:

In the work area during asbestos removal, the contractor must use a full face Type "C" continuous flow supplied air system or a pressure-demand self-contained breathing system for respiratory protection.

The appropriate level of respiratory protection shall be provided in accordance with the following table for other activities. The proper level of protection shall be determined by dividing the expected or actual airborne fiber count in the work area by the "Protection Factor" given. The level of respiratory protection which applies a maximum of 0.01 fibers/cc by the calculation shall be used as the minimum level of protection allowed.

RESPIRATORY PROTECTION FACTOR:

<u>Respiratory Selection</u>	<u>PF</u>	<u>Maximum Airborne Fiber Concentration outside the Respirator to Maintain Exposure inside the Respirator below 0.01 fibers/cc</u>
High efficiency cartridge filter type (half mask)	10	0.1 fibers/cc
High efficiency cartridge filter type (full face mask)	50	0.5 fibers/cc
Powered air purifying (PAPR) helmet type	150	1.5 fibers/cc
Powered air purifying (PAPR) tight-fitting half mask	300	3 fibers/cc
Type C continuous-flow supplied air (half mask)	500	10 fibers/cc
Type C continuous-flow supplied air (full face or hood type)	1000	20 fibers/cc
Pressure-demand self- contained breathing	1000	100 fibers/cc

Respiratory Protection Program:

Shall be carried out as set forth in ANSI Z88.2 - 1980 (or later edition)
"Practices for Respiratory Protection".

AIR PURIFYING RESPIRATORS:

Supply a sufficient quantity of respirator filters approved for asbestos,
so that workers can change filters during the work day. Respirators shall
be wet-rinsed and filters discarded each time a worker decontaminates himself.
New filter shall be installed each time a worker commences work. Respirators
and filters shall be stored at the job site in the changing room and shall
be properly protected from exposure to asbestos prior to fitting.

14.1:

Each time a respirator is put on, it shall be checked for fit with a positive and negative pressure fit test in accordance with the manufacturer's instructions or ANSI Z298.2 (1980).

TYPE "C" RESPIRATOR:

Air System Monitor:

The air system operation including compressor operations, filter system operation, back-up air capacity and all warning and monitoring devices shall be continuously monitored at all times that the system is in operation.

14.3

Employees whose vision requires the use of corrective lenses in spectacles represent a special condition when wearing a full faced respirator. Personnel who require corrective lenses should notify the employer so that measures can be taken to provide the employee with contact lenses or spec kits so as not to interfere with the respirator fit.

Employees shall use eye and face protection when machines or chemicals may be handled which could represent a potential risk to the employee.

14.4 RECHARGING OF NICKEL-CADMIUM BATTERIES FOR P.A.P.R.

In order to prevent possible ignition of flammable or combustible atmospheres, do not recharge the PAPR battery in areas where a potentially explosive concentration of combustible gas, vapor, dust or mists may be present in the atmosphere.

Always be sure to use the proper charger for the correct battery since the use of any other unit may result in damage to the respirator battery, due to the polarity difference or incorrect current input.

The battery when charged to full capacity is capable of providing a positive flow of air to the user for a period of up to (4) hours.

The PAPR battery should be charged and stored at a temperature of 65° F to 80° F to maximize battery life. Lower temperatures will decrease the available battery capacity, and the respirator running time will be reduced.

EXHIBIT I

SUBJECT: Respirator Selection for Asbestos Abatement

The Company shall provide and require to be worn, at no cost to the employee, a full facepiece supplied-air respirator operated in the pressure demand mode equipped with either an auxiliary positive pressure self-contained breathing apparatus or a HEPA filter to employees engaged in the following asbestos operations:

(a) Inside negative pressure enclosures used for removal, demolition, and renovation of friable asbestos from walls, ceilings, vessels, ventilation ducts, elevator shafts, and other structural members, but does not include pipes or piping systems; or

(b) Any dry removal of asbestos.

Respirator selection for other asbestos operations, including glove bagging pipes or piping systems shall be in accordance with the following table.

Concentration of asbestos fibers	Required Respirators (a)
Not in excess of 2 f/cc.	1. Half-mask, air purifying respirator, other than a disposable respirator, equipped with high-efficiency filters (b).
Not in excess of 10 f/cc.	1. Full facepiece air-purifying respirator equipped with high efficiency filters.
Not in excess of 20 f/cc.	1. Any powered air-purifying respirator equipped with high-efficiency filters. 2. Any supplied-air respirator operated in continuous flow mode.
Not in excess of 200 f/cc.	1. Full facepiece supplied-air respirator operated in pressure demand mode.
Greater than 200 f/cc.	1. Full facepiece supplied-air

respirator operated in pressure-demand mode equipped with either an auxiliary positive pressure self-contained breathing apparatus or a HEPA filter.

2. Full facepiece positive-pressure self-contained breathing apparatus (SCBA).
-

Note: a. Respirators assigned for higher environmental concentrations.

b. A high efficiency filter means a filter that is capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 micrometers mean aerodynamic diameter or larger.

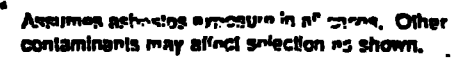


EXHIBIT 3.

SUBJECT: Irritant Fume Protocol

(i) Respirator selection.

Respirators shall be equipped with a high-efficiency cartridge.

(ii) Fit test.

(A) The test subject shall be allowed to smell a weak concentration of the irritant smoke to familiarize the subject with the characteristic odor.

(B) The test subject shall properly don the respirator selected as above, and wear it for at least ten minutes before starting the fit test.

(C) The test conductor shall review this protocol with the test subject before testing.

(D) The test subject shall perform the conventional positive pressure and negative pressure fit checks (see ANSI Z88.2 1980). Failure of either check shall be cause to select an alternate respirator.

(E) Break both ends of a ventilation smoke tube containing stannic oxychloride, such as the MSA part #5645, or equivalent. Attach a short length of tubing to one end of the smoke tube. Attach the other end of the smoke tube to a low pressure air pump set to deliver two hundred milliliters per minute.

(F) The test conductor shall direct the stream of irritant smoke from the tube towards the faceseal area of the test subject. The person conducting the test shall begin with the tube at least twelve inches from the faceseal and gradually move to within one inch, moving around the whole perimeter of the mask.

(G) The test subject shall be instructed to do the following exercises while the respirator is being challenged by the smoke. Each exercise shall be performed for one minute.

(I) Breathe normally.

(II) Breathe deeply. Be certain breaths are deep and regular.

(III) Turn head all the way from one side to the other. Be certain movement is complete. Inhale on each side. Do not bump the respirator against the shoulders.

(IV) Nod head up and down. Be certain motions are complete and made every second. Inhale when head is in the full up position (looking toward ceiling). Do not bump the respirator against the chest.

(V) Talking. Talk aloud and slowly for several minutes. The following paragraph is called the "rainbow passage." Repeating it after the test conductor (keeping eyes closed) will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

"Rainbow Passage."

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

(VI) Jogging in place.

(VII) Breathe normally.

(I) The test subject shall indicate to the test conductor if the irritant smoke is detected. If smoke is detected, the test conductor shall stop the test. In this case, the tested respirator is rejected and another test, color shall be selected.

(J) Each test subject passing the smoke test (i.e., without detecting the smoke) shall be given a sensitivity check of smoke from the same tube to determine if the test subject reacts to the smoke. Failure to evoke a response shall void the fit test.

(K) This fit test protocol, shall be performed in a location with exhaust ventilation sufficient to prevent general contamination of the testing area by the test agents.

(L) At least two facepieces shall be selected by the test subject for the fit test protocol. The test subject shall be given the opportunity to wear them for one week to choose the one which is more comfortable to wear.

(M) Respirators successfully tested by the protocol may be used in contaminated atmospheres up to 2 f/cc of asbestos.

(N) The test shall not be conducted if there is any leakage between the facepiece and the face.

(O) If the test subject has facial hair which interferes with a satisfactory fit, the hair shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied-air respirator, or self-contained breathing apparatus.

(P) If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respiratory diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

(Q) Qualitative fit testing shall be repeated at least every six months.

(R) In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:

(I) Weight change of twenty pounds or more,

(II) Significant facial scarring in the area of the facepiece seal,

(III) Significant dental changes; i.e., multiple extractions without prosthesis, or acquiring dentures,

(IV) Reconstructive or cosmetic surgery, or

(V) Any other condition that may interfere with facepiece sealing.

(iii) Recordkeeping.

A summary of all test results shall be maintained in each office for three years. The summary shall include:

17
(F) Date of test
(C) Name of test conductor
(D) Respirators selected (indicated manufacturer, model, size and
apparel number)
(E) Testing agent.

EXHIBIT 4.

SUBJECT: Quantitative Fit Test Procedures

(a) General.

(i) The method applies to the negative-pressure nonpowered air-purifying respirators only.

(ii) The Respirator Program Administrator shall assume the full responsibility for implementing the respirator quantitative fit test program.

(b) Definitions.

(i) "Quantitative fit test" means the measurement of the effectiveness of a respirator seal in excluding the ambient atmosphere. This test is performed by dividing the measured concentration of challenge agent in a test chamber by the measured concentration of the challenge agent inside the respirator facepiece when the normal air-purifying element has been replaced by an essentially perfect purifying element.

(ii) "Challenge agent" means the air contaminant introduced into a test chamber so that its concentration inside and outside the respirator may be compared.

(iii) "Test subject" means the person wearing the respirator for quantitative fit testing.

(iv) "Normal standing position" means standing erect and straight with arms down along the sides and looking straight ahead.

(v) "Fit factor" means the ratio of challenge agent concentration outside with respect to the inside of a respirator inlet covering (facepiece or

(c) Apparatus.

(i) Instrumentation. Corn oil, sodium chloride or other appropriate aerosol generation, dilution, and measurement systems shall be used for quantitative fit test.

(ii) Test Chamber. The test chamber shall be large enough to permit all test subjects to freely perform all required exercises without disturbing the challenge agent concentration or the measurement apparatus. The test chamber shall be equipped and constructed so that the challenge agent is effectively isolated from the ambient air yet uniform in concentration throughout the chamber.

(iii) When testing air-purifying respirators, the respirator shall be equipped with a cartridge or canister approved for removal of the test agent, or with a high efficiency particulate filter. Only approved assemblies shall be tested.

(iv) The sampling instrument shall be selected so that a strip chart record may be made of the test showing the rise and fall of challenge agent concentration with each inspiration and expiration at fit factors of at least two.

(v) The combination of substitute air-purifying elements (if any), challenge agent, and test chamber shall be used to maintain a concentration in the test chamber shall

be such that the test subject is not exposed in excess of PEL to the challenge agent at any time during the testing process.

(vi) The sampling port on the test specimen respirator shall be placed and constructed so that there is no detectable leak around the port, a free air flow is allowed into the sampling line at all times and so there is no interference with the fit or performance of the respirator.

(vii) The test chamber and test set-up shall permit the person administering the test to observe one test subject inside the chamber during the test.

(viii) The equipment generating the challenge atmosphere shall maintain the concentration of challenge agent constant within a ten percent variation for the duration of the test.

(ix) The time lag (interval between an event and its being recorded on the strip chart) of the instrumentation may not exceed two seconds.

(x) The tubing for the test chamber atmosphere and for the respirator sampling port shall be the same diameter, length and material. It shall be kept as short as possible. The smallest diameter tubing recommended by the manufacturer shall be used.

(xi) The exhaust flow from the test chamber shall pass through a high-efficiency filter before release to the room.

(xii) When sodium chloride aerosol is used, the relative humidity inside the test chamber shall not exceed fifty percent.

(c) Procedural requirements.

(i) The fitting of half-mask respirators should be started with those having multiple sizes and a variety of interchangeable cartridges and canisters such as the MSA Comfo II-M, North M, Survivair I-M, A-O M, or Scott-M. Use either of the checks outlined below to assure that the facepiece is properly adjusted.

(A) Positive pressure check. With the exhaust port (s) blocked, the negative pressure of slight inhalation should remain constant for several seconds.

(B) Negative pressure check. With the intake port (s) blocked, the negative pressure of slight inhalation should remain constant for several seconds.

(ii) After a facepiece is adjusted, the test subject shall wear the facepiece for at least five minutes before conducting a qualitative test by using either of the methods described below and using the exercise regime described in (e) (i) through (v) of this exhibit.

(A) Isoamyl acetate test. When using organic vapor cartridges, the test subject who can smell the odor should be unable to detect the odor of isoamyl acetate squirted into the air near the most vulnerable portions of the facepiece seal. In a location which is separated from the test area, the test subject shall be instructed to close her/his eyes during the test period. A combination cartridge or canister with organic vapor and high-efficiency filters shall be used when available for the particular mask being tested. The test subject shall be given an opportunity to smell the odor of isoamyl acetate before the test is conducted.

(B) Irritant fume test. When using high-efficiency filters, the test subject should be unable to detect the odor of irritant fume (stannic chloride or titanium tetrachloride ventilation smoke tubes) squirted into the air near the

most vulnerable portions of the facepiece seal. The test subject shall be instructed to close her/his eyes during the test period.

(iii) The test subject may enter the quantitative testing chamber only if she or he has obtained a satisfactory fit as stated in (d) (ii) of this exhibit.

(iv) Before the subject enters the test chamber, a reasonably stable challenge agent concentration shall be measured in the test chamber.

(v) Immediately after the subject enters the test chamber, the challenge agent concentration inside the respirator shall be measured to ensure that the peak penetration does not exceed five percent for a half mask and one percent for a full facepiece.

(vi) A stable challenge agent concentration shall be obtained prior to the actual start of testing.

(A) Respirator restraining straps may not be overtightened for testing. The straps shall be adjusted by the wearer to give a reasonably comfortable fit typical of normal use.

(e) Exercise regime. Prior to entering the test chamber, the test subject shall be given complete instructions as to her/his part in the test procedures. The test subject shall perform the following exercises, in the order given, for each independent test.

(i) Normal breathing (NB). In the normal standing position, without talking, the subject shall breathe normally for at least one minute.

(ii) Deep breathing (DB). In the normal standing position the subject shall do deep breathing for at least one minute pausing so as not to hyperventilate.

(iii) Turning head side to side (SS). Standing in place the subject shall slowly turn his/her head from side between the extreme positions to each side. The head shall be held at each extreme position for at least five seconds. Perform for at least three complete cycles.

(iv) Moving head up and down (UD). Standing in place, the subject shall slowly move his/her head up and down between the extreme position straight up and the extreme position straight down. The head shall be held at each extreme position for at least five seconds. Perform for at least three complete cycles.

(v) Reading (R). The test subject (keeping eyes closed) shall repeat after the test conductor the "rainbow passage" at the end of this section. The subject shall talk slowly and aloud so as to be heard clearly by the test conductor or monitor.

(vi) Grimace (G). The test subject shall grimace, smile, frown, and generally contort the face using the facial muscles. Continue for at least fifteen seconds.

(vii) Bend over and touch toes (B). The test subject shall bend at the waist and touch toes and return to upright position. Repeat for at least thirty seconds.

(viii) Jogging in place (J). The test subject shall perform jog in place for at least thirty seconds.

(ix) Normal breathing (NB). Same as exercise (e) (i) of this exhibit.
"Rainbow Passage".

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors just as glass divides white light into many colors like the spectrum. The rainbow has seven colors of light, violet on the inner edge, and

his two ends apparently beyond the horizon. There is, according to legend, a pot of gold at the end of the rainbow, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

(i) The test shall be terminated whenever any single peak penetration exceeds five percent for half-masks and one percent for full facepieces. The test subject may be refitted and retested. If two of the three required tests are terminated, the fit shall be deemed inadequate.

(ii) Calculation of fit factors.

(i) The fit factor is determined by dividing the average challenge agent concentration in the test chamber by the average challenge agent concentration inside the respirator facepiece for the test exercise.

(ii) The average test chamber concentration is the arithmetic average of the test chamber concentration at the beginning and at the end of the test.

(iii) The average peak concentration of the challenge agent inside the respirator shall be the arithmetic average peak concentrations for each of the nine exercises of the test which are computed as the arithmetic average of the peak concentrations found for each breath during the exercise.

(iv) The average peak concentration for an exercise may be determined graphically if there is not a great variation in the peak concentrations during a single exercise.

(v) Interpretation of test results. The fit factor measured by the quantitative fit testing shall be the lowest of the three fit factors resulting from three independent tests.

(i) Other requirements.

(i) The test subject shall not be permitted to wear a half-mask or full facepiece mask if the minimum fit factor of one hundred or one thousand, respectively, cannot be attained. The subject shall be instructed to avoid interference with a satisfactory fit. The subject shall be instructed to remove or adjust the mask so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied-air respirator, or self-contained breathing apparatus.

(ii) The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

(iii) If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

(iv) The test subject shall be given the opportunity to wear the assigned respirator for one week. If the respirator does not provide a satisfactory fit during actual use, the test subject may request another QNFT which shall be performed immediately.

(v) A respirator fit factor card shall be issued to the test subject with the following information:

(A) Name.

(B) Date of fit test.

(C) Fit factor obtained for each manufacturer, model and approval number of respirator tested.

(D) Name and signature of the person that conducted the test.

(vi) Filters used for qualitative or quantitative fit testing shall be replaced weekly, whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media. Organic vapor cartridges canisters shall be replaced daily or sooner if there is any indication of breakthrough by the test agent.

(j) In addition, because the sealing of the respirator may be affected, quantitative fit testing shall be repeated immediately when the test subject has a:

- (i) Weight change of twenty pounds or more,
- (ii) Significant facial scarring in the area of the facepiece seal,
- (iii) Significant dental changes; i.e., multiple extractions with prosthesis, or acquiring dentures.
- (iv) Reconstructive or cosmetic surgery, or
- (v) Any other condition that may interfere with facepiece sealing.
- (f.) Recordkeeping.

A summary of all test results shall be maintained for three years. The summary shall include:

- (i) Name of test subject.
- (ii) Date of testing.
- (iii) Name of the test conductor.
- (iv) Fit factors obtained from every respirator tested (indicate manufacturer, model, size and approval number).

EXHIBIT 5.

RESPIRATOR FIT TEST RECORD

NAME _____ INITIALS _____

Type of qualitative fit test used _____

Name of test operator _____ Initials _____

Date _____

RESPIRATOR BRAND MODEL APPROVAL # SIZE PASS/FAIL?

#1 _____ S M L P F

#2 _____ S M L P F

#3 _____ S M L P F

#4 _____ S M L P F

NOTES

This record indicates that you have passed or failed a qualitative fit test as shown above for the particular respirators shown. Other types should not be used until fit tested. Respirators tested qualitatively for protection against asbestos can only be worn up to 2 l/cc.

EXHIBIT 6.

Robert Schumacher and Associates

David Lesch
FIT TEST COORDINATOR

SCHUMACHER ASSOC. BUS: (205) 622-2541
HAZCON BUS: (205) 763-7364

NAME _____

INTERVIEWER / APPROVAL	HALF MASK	FULL FACE	FIT FACTOR	FIT DATE

Test Coordinator

RESPIRATOR INSPECTION CHECK LIST

ITEM	HALF FACE APR	FULL FACE APR	PAFR	TYPE C	SCBA
FACEPIECE					
Dirt or debris	X	X	X	X	X
Cracks, tears or holes	X	X	X	X	X
Distortion	X	X	X	X	X
Cracked or scratched lens		X	X	X	X
Looseness of parts	X	X	X	X	X
HEADSTRAPS					
Breaks or tears	X	X	X	X	X
Loss of elasticity	X	X	X	X	X
Broken or malfunctioning buckles	X	X	X	X	X
VALVES					
Dirt or dust	X	X	X	X	X
Detergent Residue	X	X	X	X	X
Distortion	X	X	X	X	X
Missing pieces	X	X	X	X	X
Fit of valve set	X	X	X	X	X
FILTERS/CARTRIDGES					
Proper one for intended use	X	X	X	X	
Approval designation	X	X	X	X	
Missing or worn gasket	X	X	X	X	
Worn threads on filter	X	X	X	X	
Cracks or dents	X	X	X	X	
Missing or loose hose clamps	X	X	X	X	
PUMPS					
Motors working			X		
Charging units			X		
Batteries			X		
Test gauges			X		
Power cords			X		
Belt holder			X		
COMPRESSORS					
Air quality				X	
Breaks or kinks in supply hose				X	
Supply hose fittings				X	
Connections				X	
Regulator set properly and working				X	
Valves working correctly				X	
Carbon monoxide alarms				X	
High temperature alarms				X	
Air purifying elements				X	
SCBA					X
Reserve air system					X
Harness					X

EXHIBIT 3.

CHECKLIST FOR RESPIRATOR PROGRAM EVALUATION

		YES	NO
1.	Are engineering controls used where feasible for control of atmospheric contamination?	_____	_____
2.	Is respiratory equipment provided when necessary?	_____	_____
3.	Does the employee use the respiratory protection in accordance with instructions and training he received?	_____	_____
4.	Are written operating procedures which govern the selection and use of the respirators available?	_____	_____
5.	Are all respirators selected for the particular hazard?	_____	_____
6.	Does the employee receive training in the use of the respirator and is he instructed as to its limitations?	_____	_____
7.	Are respirators assigned on an individual basis, when practicable?	_____	_____
8.	Are respirators cleaned and disinfected on a regular basis? (When used by more than one person, after each use; when individually assigned, after each day's use).	_____	_____
9.	Are respirators in a convenient, clean, and sanitary location?	_____	_____
10.	Are respirators inspected during cleaning and are deteriorated parts replaced?	_____	_____
11.	Are respirators which are used for emergencies inspected on a monthly basis and after each use?	_____	_____
12.	Is appropriate surveillance of the work area conducted?	_____	_____
13.	Is the level of exposure to an employee	_____	_____

not intained?

14. Is the continued effectiveness of the respiratory program determined through regular evaluation?
15. Before employees are assigned a task which require a respirator to be worn, do you determine whether or not the employee can perform the work while using the equipment?
16. Do you periodically check the medical status of all employees who wear respirators?
17. Are all respirators approved by the National Institute for Occupational Safety and Health or the Mining Safety and Health Administration?
18. Is the respirator selected according to the guidance of the American National Standard Practices for Respiratory Protection Z69.2-1966?
19. When oxygen is used, does it meet the requirements of the United States Pharmacopoeia for medical or breathing oxygen?
20. Does breathing air meet the requirements of the specifications for Grade D breathing air?
21. Are steps taken to insure that compressed oxygen is not used where compressed air has once been used?
22. Are measures taken to see that oxygen is not used for airline respirators?
23. Is the compressor, used for supplying air, equipped with necessary safety and standby devices?
24. Is the compressor designed, constructed, and used so that its exhaust does not re-enter the system?
25. Does the compressor have in-line air purifying devices?
26. Are there any other safety devices which are used to escape should the compressor fail?
27. Are measures present in the system to isolate

- compressor failure and over-heating? _____
25. If the compressor is of the oil-lubricated type, does it have a high-temperature or carbon monoxide alarm or both? _____
29. If only high-temperature alarm is installed, are tests performed periodically to insure that the carbon monoxide level is less than 20 ppm? _____
30. Do you insure that the air-line coupling is compatible with outlets from other gas systems? _____
31. Are breathing gas containers properly marked? _____
32. When respirators are individually assigned, are they durably marked as to identify the user? _____
33. Is a record maintained which shows the date the respective respirator was issued? _____
34. Are personnel familiar with the written procedures which cover the use of respirators in dangerous atmospheres and the use of the respirators in emergencies? _____
35. Are steps taken to insure that there is at least one additional man present when a person wearing a respirator could be overcome by a toxic or oxygen deficient atmosphere? _____
36. Is communication (visual, voice or signal line) maintained between all individuals present in toxic or oxygen deficient atmosphere? _____
37. Do emergency plans exist and is proper rescue equipment present? _____
38. Are respirators being used in atmospheres immediately hazardous to life or health? _____
39. Are frequent random inspections performed to assure that all respirators are properly selected, used, cleaned and maintained? _____
40. Does the training of employees who use respirators include: proper fitting; testing face-piece-to-face seal; working in normal air for a familiarity period and working in a test atmosphere? _____

Are employees instructed not to wear beards, sideburns, skull caps or temple pieces or glasses that might project under the respirator? (Reason: These conditions will prevent the formation of a good seal between respirator and face.)

42. Does the employee check the respirator for proper fit after putting it on?

43. Are provisions made for people who wear corrective glasses and also use a respirator?

44. Are employees instructed not to wear contact lenses with a respirator if the risk of eye damage is increased by their use?

45. Are self-contained breathing apparatuses inspected monthly?

46. Is a record maintained of inspection dates and findings for emergency use?

47. If replacement or repair of respirators accomplished only by experienced people with designated parts?

48. Are reducing or admission valves or regulators adjusted or repaired by the manufacturer of a trained technician?

49. Are employees instructed in the correct way to store respirators?

50. Is the location of all respirators to be used in emergencies clearly marked?

51. Are checks made to insure that employees are not storing respirators in tool boxes or lockers without first placing them in proper container?

52. Are respirators stored or packed so that the face piece and exhalation valve rests in a normal position?

53. Does the person who issues gas masks insure that they are properly labeled and color coded?

54. Does the person who issues gas masks insure that the label and color code is maintained?

until the canisters have completely served their purpose?

55. Is the following phrase printed in bold letters on each canister?

Canister for _____
Name for atmospheric contaminant
or
Type N Gas Mask Canister

56. In addition, does the following wording appear beneath the appropriate phrase on the canister?
"For respiratory protection in atmospheres containing more than _____ percent by volume of _____
(Name of atmospheric contaminant)

57. Do canisters having a special high efficiency filter for protection against radionuclides and other highly toxic particulates have a label with a statement of the type and degree of protection afforded by the filter?

58. Is the label affixed to the neck end of, or to the gray strip which is around and near the top of the canister?

59. Does each gas mask canister have a label warning that the gas mask should be used only in atmospheres containing sufficient oxygen to support life (at least 19.5% by volume).

60. Is each gas mask canister painted a distinctive color or combination of colors in accordance with ANSI Z39.1-1973?

SAFE AIR 11 OILESS BREATHING STATION CALIBRATION FORM

(Signature)

[illegible]

115-4 #5

LABORATORY QUALIFICATIONS

Professional Service Industries/Pittsburgh Testing Laboratory Division, Spokane Office, has been offering professional inspection, sampling, and analysis since March 1986. We are successful participants in the NIOSH PAT (Proficiency Analytical Testing) program for airborne asbestos (lab #98202-001). Our laboratory in Pittsburgh, Pennsylvania is AIHA accredited (lab #330). TEM/SAM analysis is performed by our lab in Pittsburgh, Pennsylvania.

All of our PCM (Phase Contrast Microscopy) analysis is performed according to the NIOSH 7400 method by technicians who have attended a NIOSH 582 course. Samples can be analyzed both in our lab and in the field. Air sample analysis performed during an abatement project is generally done by setting up a lab on site. This gives turnaround time of just a few hours for results.

On-site analysis will be utilized during this project. Daily microscope calibration will be accomplished with the use of an HSE/NPL phase test slide.

AIHA lab recounts will be conducted for all clearance samples and 10% of all other samples.

Phase Contrast Microscopy recounts will be performed in our Spokane laboratory, if AIHA accreditation is required, they will be analyzed in our PSI office in Pittsburgh, PA (lab #330). Our Spokane lab has been offering professional sampling analysis of bulk and air samples since March 1986. We are successful participants of the NIOSH PAT program (lab #98202-001). See copy of the most recent round results. Our lab in Pittsburgh, PA will also be used for TEM analysis, if needed. They have been NVLAP accredited for TEM as well. See certificates attached.

Our lab in Pittsburgh, Pennsylvania, will perform any TEM analysis which may be required, the NIOSH 7402 method will be utilized. They have been accredited by NVLAP to perform any AHERA related TEM analysis, see attached. This accreditation has superseded the EPA Asbestos-in-schools regulation of October 30, 1993.

QUALITY CONTROL PROCEDURE
INDUSTRIAL HYGIENE ASBESTOS LABORATORY

- I. **Scope:** This procedure covers all asbestos related work done at the PSI/PTL Spokane Laboratory and is designed to meet the intent and criteria for an industrial hygiene laboratory as accredited by the American Industrial Hygiene Association.
- II. **References:**
1. PTL Corporate Quality Assurance Manual QAM-1, latest revision
 2. PTL Quality Control Procedures Manual, latest revision
 3. AIHA Quality Control Manual for the Industrial Hygiene Laboratory, latest revision
 4. PTL Safety Manual, latest revision
 5. PTL Field sampling, monitoring and assessment
- III. **Sample Control**
1. Each sample will be individually verified by Asbestos Laboratory personnel against the shipping papers and purchase order documentation
 2. Each sample will be uniquely identified by a number which is recorded on the sample and logged into the Asbestos Laboratory Record
 3. Records including sample identifications are to be kept until full and complete documentation is received, recorded, and verified as correct
 4. Sample disposal shall be made via approved EPA, State and other applicable requirements
 5. Report shall be complete, accurate, confidential issued in a timely manner to client and signed by the analyst and by the lab manager.
- IV. **Analytical Procedures:**
1. All chemicals and reagents shall be checked on receipt, properly labeled, stored, marked with expiration date and shall be ACS grade or equivalent.
 2. NIOSH Analytical Methods Vol. I-VI shall govern laboratory procedures and determinations. Any deviation from this procedure or the approved reference test methods shall not be permitted unless approved by the lab director.
 3. All reports shall be signed by the analyst and reviewed and approved by the lab director.
 4. Only approved report formats (QC forms 4 & 5) shall be used. Each report shall be completed and accurate and maintained on file with appropriate supporting data, raw data, purchase orders, field data, etc.
- VI **Analytical Personnel requirements:**
1. All personnel shall receive training for and sign the asbestos training and safety procedures Appendix 2 of Reference 4, PSI/PTL Safety Procedure.
 2. All analytical personnel shall be trained, examined by written test and shall be required to demonstrate proficiency using either ten (10) NIOSH PAT Airborne samples or ten (10) EPA bulk standard samples.
 3. All analytical personnel shall individually participate and be evaluated each round of NIOSH PAT and EPA bulk programs. Records shall be maintained.

VI. Intra-Laboratory QC Program:

1. Control charts for each analyst are to be maintained as discussed above.
2. The laboratory director shall periodically overcheck analyst results. Control samples shall be used.
3. At least 10% of analyst results per month shall be independently overchecked by a Lead Analyst and/or by the laboratory director. Similarly at least 10% of lead analyst results per month shall be independently overchecked by another Lead Analyst or by the Laboratory (form 1).

VII. Inter-Laboratory Quality Control Program

1. PSI/PTL shall continue to participate in each round of the NIOSH PAT Airborne Fiber Analysis Program (form 2).
2. PSI/PTL shall continue to participate in each round of the EPA Research Triangle Bulk Asbestos Program (form 3).
3. Each quarter PSI/PTL will voluntarily submit at least four (4) air and four (4) bulk samples in a blind manner to an AIHA Accredited Laboratory. Results shall be recorded and correlated with the PTL analytical results obtained.

VIII. Instrument Calibration and Maintenance:

1. Instruments and measuring equipment shall be calibrated and properly maintained. Records shall be maintained in the Asbestos Equipment and Calibration Manual.
2. Microscopes shall be calibrated at least each six (6) months.
3. Air sampling pumps shall be calibrated before each use.
4. Calibration procedures, preventive maintenance, repairs, and modifications shall be recorded in the Asbestos Equipment Calibration Manual.

IX. Internal Control:

1. The Asbestos Laboratory shall be audited at least each year by the Independent Quality Assurance Department. Results of the audit and corrective action shall be on file.

X. Responsibilities:

1. The Laboratory Director shall have complete control for all aspects of the Asbestos Laboratory. The Director shall establish standards and ensure that all work is done in accordance with highest professional standards as per this procedure and AIHA guidelines for an accredited laboratory (reference 2). The Lab Director is responsible for quality control and statistical analyses and control.
2. Lead Analysts shall be responsible to conduct accurate and precise analyses and overcheck analysts results when requested by the Laboratory Director. Additionally, they are to maintain up-to-date, accurate and complete records and reports.
3. Analysts shall be responsible to conduct accurate and precise analyses. Additionally, they are to maintain up-to-date, accurate and complete records and reports.

4. Technicians are responsible for completing accurate and timely field sampling, equipment calibration, inspection reports and sampling data reports.
5. The lab director shall ensure appropriate procedures, manual and methods revisions are to be kept current and that are communicated to, followed by, and available to laboratory personnel. Any revisions to methods, manuals or procedures must be documented and approved in writing by the lab director. A record of revisions shall be kept with each document.

XI. Laboratory Hygiene

1. No smoking in the laboratory
2. No eating or drinking in the laboratory
3. No carpets, plants, extraneous loose clothing (coats, etc.) in the laboratory
4. The laboratory floor and counter top surfaces shall be cleaned each day
5. Equipment such as microscopes shall be covered and/or stored when not in use. Prior to use, they shall be checked for cleanliness.
6. Physical and engineering controls shall be used as required by the laboratory director. Included in this shall be the following requirements:
 - a. Asbestos samples shall always be contained such that absolute minimum fiber release is assured by engineering controls
 - b. Sealed and sturdy storage containers shall be used
 - c. Transfer of bulk asbestos to the dispersion staining oil and slide and also physical observation under the stereomicroscope shall be done in a negative pressure HEPA filter exhaust glovebox.
 - d. Air conditioning and physical arrangements of furniture equipment, airflows, etc. will be maintained as instructed by the laboratory director.
7. Utmost cleanliness and orderliness shall be maintained at all times. Any employee deviating from this practice shall be subject to discipline.

XII. Terminology:

1. Industrial Hygiene and statistical terminology are defined in the glossary of AIHA Reference 2.

XIII. Laboratory Safety:

1. Safety is the first priority and responsibility of all employees.
2. Each employee must read, understand and sign the asbestos Lab Safety Procedure, reference 3.
3. Unsafe acts will be grounds for dismissal.
4. The lab director will be responsible to develop, implement, and maintain lab safety.
5. Appropriate safety equipment will be made available and must be used as directed by the lab director.

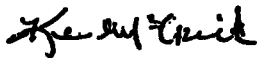
XIV. Field Sampling, Monitoring and Assessment Procedures:

1. Reference forms and methods are provided in the field sampling, monitoring and assessment manual. These are to be strictly used and followed unless otherwise directed by the lab director.

2. Data shall be recorded neatly, completely and in a timely manner by the technician.
3. Field data shall be identified with, submitted with and kept on file with corresponding samples and reports.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.
Pittsburgh Testing Laboratory Division



Kevin McCrink
Department Manager
Environmental Services

KM:cm



Professional Service Industries, Inc.

INDUSTRIAL HYGIENE

The following technicians conduct the environmental monitoring on our projects. Their statement of qualifications and NIOSH 582 certificates are attached in Appendix A.

Eric Ochs
Todd Fix
Nick Motzny

Staff Geologist
Lead Technician
Industrial Hygienist

AIR MONITORING PROGRAM

Monitoring of airborne concentrations of asbestos fibers shall be in accordance with 29 CFR 1910.1001, 29 CFR 1926.58 and as specified below. NIOSH 7400 method will be utilized for airborne analysis. Bulk samples will be analyzed by Polarized Light Microscopy (PLM) with dispersion staining oils in PSI's NVLAP accredited laboratory located in Portland, Oregon.

Air monitoring will be accomplished by the use of SKC Aircheck low volume and a variety of high volume air sampling pumps. Primary calibration is achieved through a standard bubble burette calibration devices. Secondary calibration is achieved through a portable rotameter. Cassettes used will be black, static free, 25 mm cassettes with a 50 mm extension cowl.

The technician taking the air samples will be equipped with portable rotameter for on-site calibration.

Listed below are the types of air samples to be taken while removal is being conducted:

Pre-abatement sampling: Pre-abatement sample(s) will be taken with a minimum volume of 1200 liters. Minimum of one inside each work area, and one outside each work area.

Personal Samples: To be taken in the breathing zone of the "most contaminated worker". This sample will be taken at a flow rate not to exceed 2.5 l/m.

Inside work area: (IWA) At least one IWA sample will be taken per shift. This sample will be located between where the actual work is taking place and the intake for the negative air machine(s), and at the approximate height of the breathing zone of the workers.

Outside Work Area: (OWA) An OWA sample will be taken within 10 feet of the exit to the decontamination chamber. These sample swill be taken during each asbestos containment work shift.

Negative Air Exhaust: At least one sample per work shift will be taken within 10 feet of the exhaust of the HEPA filtration unit(s).

Clearance Sampling: After all ACM has been removed from the work area and encapsulation has been completed, the work area will be allowed to sit overnight with the negative air machines running. The following morning, clearance sample(s) will be taken with a minimum volume of 2000 liters of air being sampled. The area will be considered clear if the clearance sample result is less than or equal to 0.010 f/cc, whichever is lower. A minimum of one sample inside, and one sample outside each work area will be taken. For glovebag removal - each room will be cleared with a minimum of one sample.

Summary of Air Sampling During Abatement:

During abatement in full containments:

Sample location	Minimum # of Samples/day	Flow Rate	Minimum Sample Volume
Most contaminated worker (personal)	1	1.25 l/m	240 liters
Inside work area (IWA)	1	1-10 l/m	240 liters
Outside work area (OWA)	1	1-10 l/m	480 liters
Negative air (HEPA) exhaust	1	1-10 l/m	480 liters

During abatement using glovebag method:

Sample location	Minimum # of Samples/day	Flow Rate	Minimum Sample Volume
Glovebag worker	1 per every 4 workers	1.25 l/m	240 liters
Inside work area (IWA)	1	1-10 l/m	480 liters
Outside work area (OWA)	1	1-10 l/m	480 liters

Professional Service Industries, Inc.

510 East 22nd Street
Lombard, Illinois 60148

This is to certify that

Eric Ochs

S.S. #536-78-0672

*has successfully completed Educational Curriculum,
the required demonstrated proficiency, and examination on
the subject of*

SAMPLING AND EVALUATING AIRBORNE ASBESTOS DUST
NIOSH 582 METHOD 7400

Presented by Margaret M. Archer
Margaret M. Archer
Asbestos Coordinator



Given this 3rd day of November 19 89

Certificate (b) (6)



University of Washington

Northwest Center for
Occupational Health and Safety

This is to certify that

TODD J. FIX

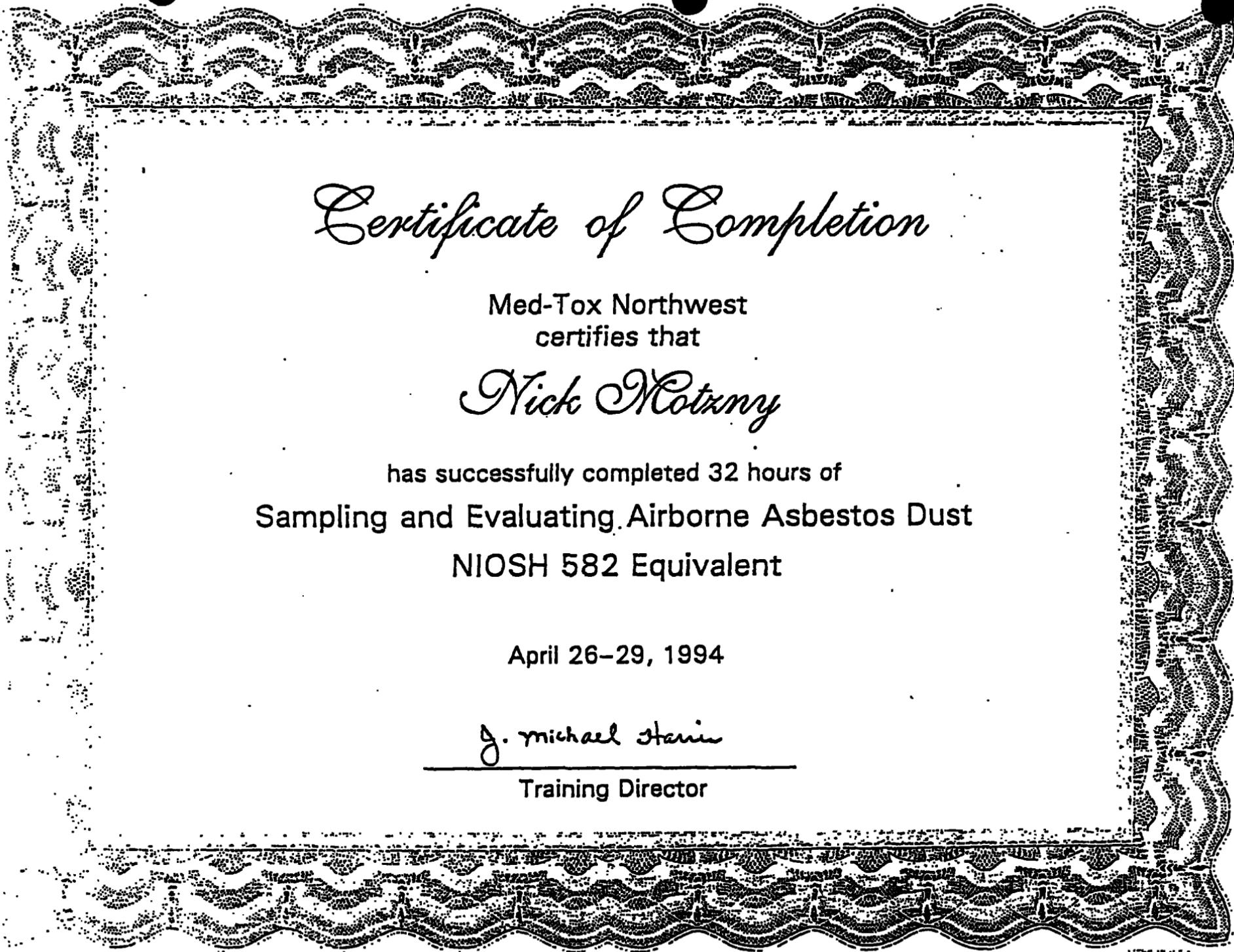
Successfully completed 32 hours of instruction in

Sampling and Evaluating Airborne Asbestos Dust

June 10-14, 1991

Signature

Signature



Certificate of Completion

Med-Tox Northwest
certifies that

Nick Motzmy

has successfully completed 32 hours of
Sampling and Evaluating Airborne Asbestos Dust
NIOSH 582 Equivalent

April 26-29, 1994

J. Michael Starin

Training Director

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation

PROFESSIONAL SERVICE INDUSTRIES, INC.
PORTLAND, OR

*is recognized under the National Voluntary Laboratory Accreditation Program
for satisfactory compliance with criteria established in Title 15, Part 7 Code of Federal Regulations.
Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:*

BULK ASBESTOS FIBER ANALYSIS

April 1, 1995
Effective until



Richard D. Phalen
For the National Institute of Standards and Technology

NVLAP LAB CODE: 1472

ITEM #5

LABORATORY QUALIFICATIONS

Professional Service Industries/Pittsburgh Testing Laboratory Division, Spokane Office, has been offering professional inspection, sampling, and analysis since March 1986. We are successful participants in the NIOSH PAT (Proficiency Analytical Testing) program for airborne asbestos (lab #98202-001). Our laboratory in Pittsburgh, Pennsylvania is AIHA accredited (lab #330). TEM/SAM analysis is performed by our lab in Pittsburgh, Pennsylvania.

All of our PCM (Phase Contrast Microscopy) analysis is performed according to the NIOSH 7400 method by technicians who have attended a NIOSH 582 course. Samples can be analyzed both in our lab and in the field. Air sample analysis performed during an abatement project is generally done by setting up a lab on site. This gives turnaround time of just a few hours for results.

On-site analysis will be utilized during this project. Daily microscope calibration will be accomplished with the use of an HSE/NPL phase test slide.

AIHA lab recounts will be conducted for all clearance samples and 10% of all other samples.

Phase Contrast Microscopy recounts will be performed in our Spokane laboratory, if AIHA accreditation is required, they will be analyzed in our PSI office in Pittsburgh, PA (lab #330). Our Spokane lab has been offering professional sampling analysis of bulk and air samples since March 1986. We are successful participants of the NIOSH PAT program (lab #98202-001). See copy of the most recent round results. Our lab in Pittsburgh, PA will also be used for TEM analysis, if needed. They have been NVLAP accredited for TEM as well. See certificates attached.

Our lab in Pittsburgh, Pennsylvania, will perform any TEM analysis which may be required, the NIOSH 7402 method will be utilized. They have been accredited by NVLAP to perform any AHERA related TEM analysis, see attached. This accreditation has superseded the EPA Asbestos-in-schools regulation of October 30, 1993.

**QUALITY CONTROL PROCEDURE
INDUSTRIAL HYGIENE ASBESTOS LABORATORY**

- I. **Scope:** This procedure covers all asbestos related work done at the PSI/PTL Spokane Laboratory and is designed to meet the intent and criteria for an industrial hygiene laboratory as accredited by the American Industrial Hygiene Association.
- II. **References:**
1. PTL Corporate Quality Assurance Manual QAM-1, latest revision
 2. PTL Quality Control Procedures Manual, latest revision
 3. AIHA Quality Control Manual for the Industrial Hygiene Laboratory, latest revision
 4. PTL Safety Manual, latest revision
 5. PTL Field sampling, monitoring and assessment
- III. **Sample Control**
1. Each sample will be individually verified by Asbestos Laboratory personnel against the shipping papers and purchase order documentation
 2. Each sample will be uniquely identified by a number which is recorded on the sample and logged into the Asbestos Laboratory Record
 3. Records including sample identifications are to be kept until full and complete documentation is received, recorded, and verified as correct
 4. Sample disposal shall be made via approved EPA, State and other applicable requirements
 5. Report shall be complete, accurate, confidential issued in a timely manner to client and signed by the analyst and by the lab manager.
- IV. **Analytical Procedures:**
1. All chemicals and reagents shall be checked on receipt, properly labeled, stored, marked with expiration date and shall be ACS grade or equivalent.
 2. NIOSH Analytical Methods Vol. I-VI shall govern laboratory procedures and determinations. Any deviation from this procedure or the approved reference test methods shall not be permitted unless approved by the lab director.
 3. All reports shall be signed by the analyst and reviewed and approved by the lab director.
 4. Only approved report formats (QC forms 4 & 5) shall be used. Each report shall be completed and accurate and maintained on file with appropriate supporting data, raw data, purchase orders, field data, etc.
- VI. **Analytical Personnel requirements:**
1. All personnel shall receive training for and sign the asbestos training and safety procedures Appendix 2 of Reference 4, PSI/PTL Safety Procedure.
 2. All analytical personnel shall be trained, examined by written test and shall be required to demonstrate proficiency using either ten (10) NIOSH PAT Airborne samples or ten (10) EPA bulk standard samples.
 3. All analytical personnel shall individually participate and be evaluated each round of NIOSH PAT and EPA bulk programs. Records shall be maintained.

VI. Intra-Laboratory QC Program:

1. Control charts for each analyst are to be maintained as discussed above.
2. The laboratory director shall periodically overcheck analyst results. Control samples shall be used.
3. At least 10% of analyst results per month shall be independently overchecked by a Lead Analyst and/or by the laboratory director. Similarly at least 10% of lead analyst results per month shall be independently overchecked by another Lead Analyst or by the Laboratory (form 1).

VII. Inter-Laboratory Quality Control Program

1. PSI/PTL shall continue to participate in each round of the NIOSH PAT Airborne Fiber Analysis Program (form 2).
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VIII. Instrument Calibration and Maintenance:

1. Instruments and measuring equipment shall be calibrated and properly maintained. Records shall be maintained in the Asbestos Equipment and Calibration Manual.
2. Microscopes shall be calibrated at least each six (6) months.
3. Air sampling pumps shall be calibrated before each use.
4. Calibration procedures, preventive maintenance, repairs, and modifications shall be recorded in the Asbestos Equipment Calibration Manual.

IX. Internal Control:

1. The Asbestos Laboratory shall be audited at least each year by the Independent Quality Assurance Department. Results of the audit and corrective action shall be on file.

X. Responsibilities:

1. The Laboratory Director shall have complete control for all aspects of the Asbestos Laboratory. The Director shall establish standards and ensure that all work is done in accordance with highest professional standards as per this procedure and AIHA guidelines for an accredited laboratory (reference 2). The Lab Director is responsible for quality control and statistical analyses and control.
2. Lead Analysts shall be responsible to conduct accurate and precise analyses and overcheck analysts results when requested by the Laboratory Director. Additionally, they are to maintain up-to-date, accurate and complete records and reports.
3. Analysts shall be responsible to conduct accurate and precise analyses. Additionally, they are to maintain up-to-date, accurate and complete records and reports.

4. Technicians are responsible for completing accurate and timely field sampling, equipment calibration, inspection reports and sampling data reports.
5. The lab director shall ensure appropriate procedures, manual and methods revisions are to be kept current and that are communicated to, followed by, and available to laboratory personnel. Any revisions to methods, manuals or procedures must be documented and approved in writing by the lab director. A record of revisions shall be kept with each document.

XI. Laboratory Hygiene

1. No smoking in the laboratory
2. No eating or drinking in the laboratory
3. No carpets, plants, extraneous loose clothing (coats, etc.) in the laboratory
4. The laboratory floor and counter top surfaces shall be cleaned each day
5. Equipment such as microscopes shall be covered and/or stored when not in use. Prior to use, they shall be checked for cleanliness.
6. Physical and engineering controls shall be used as required by the laboratory director. Included in this shall be the following requirements:
 - a. Asbestos samples shall always be contained such that absolute minimum fiber release is assured by engineering controls
 - b. Sealed and sturdy storage containers shall be used
 - c. Transfer of bulk asbestos to the dispersion staining oil and slide and also physical observation under the stereomicroscope shall be done in a negative pressure HEPA filter exhaust glovebox.
 - d. Air conditioning and physical arrangements of furniture equipment, airflows, etc. will be maintained as instructed by the laboratory director.
7. Utmost cleanliness and orderliness shall be maintained at all times. Any employee deviating from this practice shall be subject to discipline.

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1. Industrial Hygiene and statistical terminology are defined in the glossary of AIHA Reference 2.

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1. Safety is the first priority and responsibility of all employees.
2. Each employee must read, understand and sign the asbestos Lab Safety Procedure, reference 3.
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4. The lab director will be responsible to develop, implement, and maintain lab safety.
5. Appropriate safety equipment will be made available and must be used as directed by the lab director.

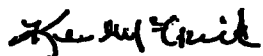
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1. Reference forms and methods are provided in the field sampling, monitoring and assessment manual. These are to be strictly used and followed unless otherwise directed by the lab director.

2. Data shall be recorded neatly, completely and in a timely manner by the technician.
3. Field data shall be identified with, submitted with and kept on file with corresponding samples and reports.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.
Pittsburgh Testing Laboratory Division



Kevin McCrink
Department Manager
Environmental Services

KM:cm



Professional Service Industries, Inc.

INDUSTRIAL HYGIENE

The following technicians conduct the environmental monitoring on our projects. Their statement of qualifications and NIOSH 582 certificates are attached in Appendix A.

Eric Ochs
Todd Fix
Nick Motzny

Staff Geologist
Lead Technician
Industrial Hygienist

AIR MONITORING PROGRAM

Monitoring of airborne concentrations of asbestos fibers shall be in accordance with 29 CFR 1910.1001, 29 CFR 1926.58 and as specified below. NIOSH 7400 method will be utilized for airborne analysis. Bulk samples will be analyzed by Polarized Light Microscopy (PLM) with dispersion staining oils in PSI's NVLAP accredited laboratory located in Portland, Oregon.

Air monitoring will be accomplished by the use of SKC Aircheck low volume and a variety of high volume air sampling pumps. Primary calibration is achieved through a standard bubble burette calibration devices. Secondary calibration is achieved through a portable rotameter. Cassettes used will be black, static free, 25 mm cassettes with a 50 mm extension cowl.

The technician taking the air samples will be equipped with portable rotameter for on-site calibration.

Listed below are the types of air samples to be taken while removal is being conducted:

Pre-abatement sampling: Pre-abatement sample(s) will be taken with a minimum volume of 1200 liters. Minimum of one inside each work area, and one outside each work area.

Personal Samples: To be taken in the breathing zone of the "most contaminated worker". This sample will be taken at a flow rate not to exceed 2.5 l/m.

Inside work area: (IWA) At least one IWA sample will be taken per shift. This sample will be located between where the actual work is taking place and the intake for the negative air machine(s), and at the approximate height of the breathing zone of the workers.

Outside Work Area: (OWA) An OWA sample will be taken within 10 feet of the exit to the decontamination chamber. These sample swill be taken during each asbestos containment work shift.

Negative Air Exhaust: At least one sample per work shift will be taken within 10 feet of the exhaust of the HEPA filtration unit(s).

Clearance Sampling: After all ACM has been removed from the work area and encapsulation has been completed, the work area will be allowed to sit overnight with the negative air machines running. The following morning, clearance sample(s) will be taken with a minimum volume of 2000 liters of air being sampled. The area will be considered clear if the clearance sample result is less than or equal to 0.010 f/cc, whichever is lower. A minimum of one sample inside, and one sample outside each work area will be taken. For glovebag removal - each room will be cleared with a minimum of one sample.

Summary of Air Sampling During Abatement:

During abatement in full containments:

Sample location	Minimum # of Samples/day	Flow Rate	Minimum Sample Volume
Most contaminated worker (personal)	1	1.25 l/m	240 liters
Inside work area (IWA)	1	1-10 l/m	240 liters
Outside work area (OWA)	1	1-10 l/m	480 liters
Negative air (HEPA) exhaust	1	1-10 l/m	480 liters

During abatement using glovebag method:

Sample location	Minimum # of Samples/day	Flow Rate	Minimum Sample Volume
Glovebag worker	1 per every 4 workers	1.25 l/m	240 liters
Inside work area (IWA)	1	1-10 l/m	480 liters
Outside work area (OWA)	1	1-10 l/m	480 liters

Professional Service Industries, Inc.

510 East 22nd Street
Lombard, Illinois 60148

This is to certify that

Eric Ochs

S.S. (b) (6)

*has successfully completed Educational Curriculum,
the required demonstrated proficiency, and examination on
the subject of*

SAMPLING AND EVALUATING AIRBORNE ASBESTOS DUST
NIOSH 582 METHOD 7400

Presented by Margaret M. Archer
Margaret M. Archer
Asbestos Coordinator



Given this 3rd *day of* November 19 89

Certificate No.: (b) (6)



University of Washington
Northwest Center for
Occupational Health and Safety

This is to certify that

TODD J. FIX

Successfully completed 32 *hours of instruction in*

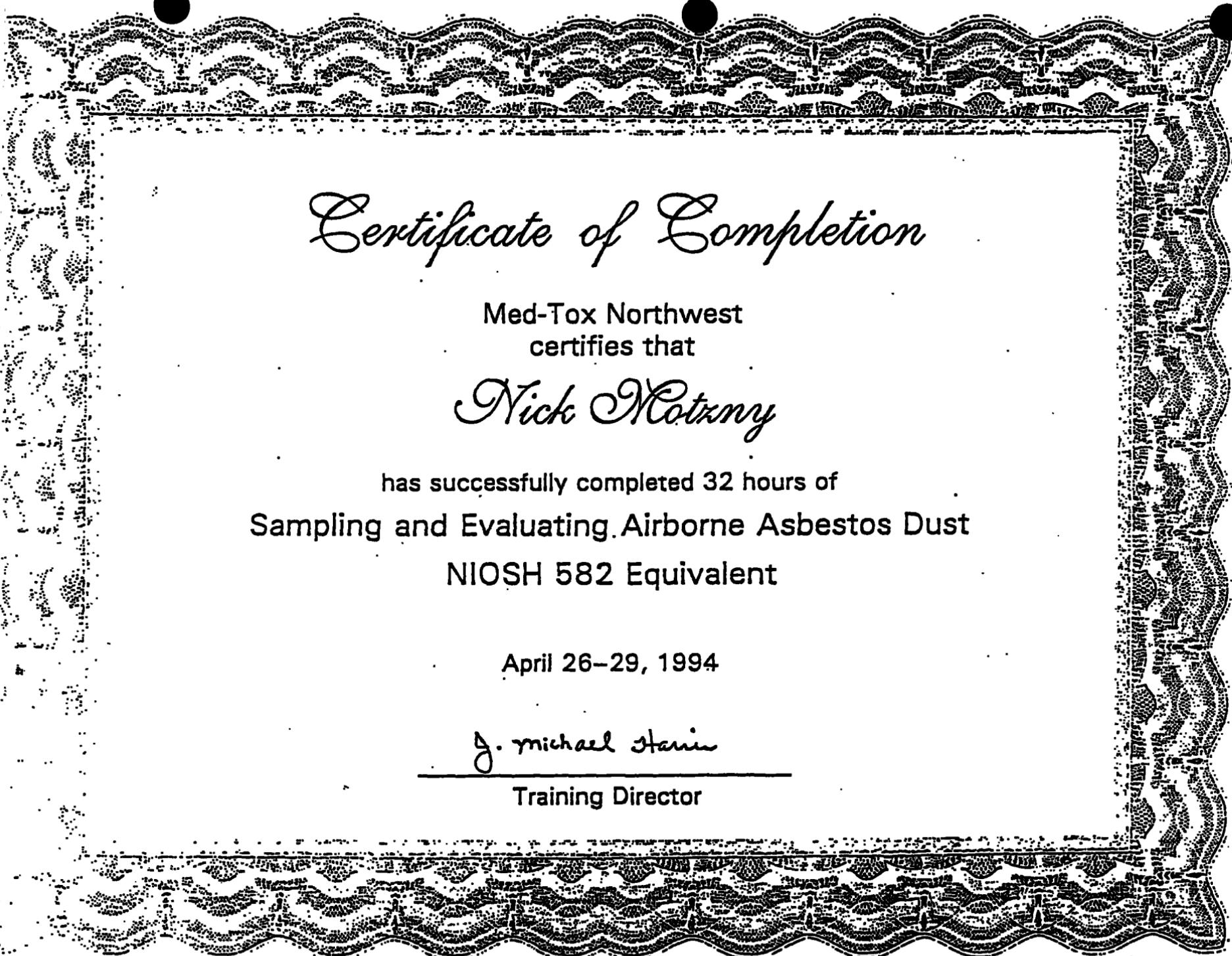
Sampling and Evaluating Airborne Asbestos Dust

June 10-14, 1991

1250

Wendie L. Kugel

Director



Certificate of Completion

Med-Tox Northwest
certifies that

Nick Motomy

has successfully completed 32 hours of
Sampling and Evaluating Airborne Asbestos Dust
NIOSH 582 Equivalent

April 26-29, 1994

J. Michael Harris

Training Director

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation

PROFESSIONAL SERVICE INDUSTRIES, INC.
PORTLAND, OR

*is recognized under the National Voluntary Laboratory Accreditation Program
for satisfactory compliance with criteria established in Title 15, Part 7 Code of Federal Regulations.
Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:*

BULK ASBESTOS FIBER ANALYSIS

April 1, 1995
Effective until



Albert D. Phalen
For the National Institute of Standards and Technology

NVLAP LAB CODE: 1472

NOTIFICATION OF DEMOLITION AND RENOVATION

Operator Project #	Postmark	Date Received	Notification #
I. TYPE OF NOTIFICATION (D-Original R-Revised C-Cancelled) 0			
II. FACILITY INFORMATION (Identify owner, removal contractor, and other operator)			
OWNER NAME: <u>Bunker Limited Partnership</u>			
Address: <u>135 E Cameron Ave</u>			
City: <u>Kellogg</u>	State: <u>Id</u>	Zip: <u></u>	
Contact: <u>Frank Bridt</u>	Tel: <u>208-783-1200</u>		
REMOVAL CONTRACTOR: <u>Specialty Asbestos</u>			
Address: <u>11616 E. Montgomery</u>			
City: <u>S. Pokane</u>	State: <u>wa</u>	Zip: <u>99206</u>	
Contact: <u>Tessie Mask / Vic Mshan</u>	Tel: <u>509-921-9395</u>		
OTHER OPERATOR: <u>Rust Remedial Services Inc. (Gov. Gov.)</u>			
Address: <u>4245 Technology</u>			
City: <u>Fremont</u>	State: <u>CA</u>	Zip: <u>94538</u>	
Contact: <u>Jim Bushnell</u>	Tel: <u>510-770-0675</u>		
III. TYPE OF OPERATION (D-Demo O-Ordered Demo R-Renovation E-Emer. Renovation) D			
IV. IS ASBESTOS PRESENT? (Yes/No) Yes			
V. FACILITY DESCRIPTION (include building name, number and floor or room number)			
Bldg. Name: <u>Concentrator / Silo</u>			
Address: <u>McKinley Ave</u>			
City: <u>Kellogg</u>	State: <u>Id</u>	County: <u>Shoshone</u>	
Site Location: <u>Bunker Hill Super Fund Site</u>			
Building Size: <u>69,000 ft²</u>	# of Floors: <u>3</u>	Age in Years: <u>50</u>	
Present Use: <u>Abandoned</u>	Prior Use: <u>Milling Ore</u>		
VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:			
<u>Visual inspection & PLM - Bulk sampling</u>			
VII. APPROXIMATE AMOUNT OF ASBESTOS INCLUDING:		Nonfriable Asbestos Material Not To Be Removed	
1. Regulated ACM to be Removed 2. Category I ACM Not Removed 3. Category II ACM Not Removed		Indicate Unit of Measurement Below	
	RACM To Be Removed	Category I	Category II
Pipes	<u>730</u>		Ln Ft: <u>X</u> Ln M: <u></u>
Surface Area	<u>200</u>	<u>114,600</u>	Sq Ft: <u>✓</u> Sq M: <u></u>
Vol RACM OR Facility Component			Cu Ft: <u></u> Cu M: <u></u>
VIII. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) Start: <u>10-03-94</u>		Complete: <u>11-19-94</u>	
IX. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) Start: <u>10-03-94</u>		Complete: <u>11-19-94</u>	

X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:

Asbestos Abatement
Pipes cut a wrap w/ GLOVE bags - tanks & wrap a DISPOS
Roofing - Hand removal - G Absiding a Roofing Hand Removal

XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION OR RENOVATION SITE:

wetted Material, Glove bags Enclosed Areas
ALL removal by Hand methods

XII. WASTE TRANSPORTER #1

SPECIALTY ASBESTOS

Name:

Address:

City:

State:

Zip:

Contact Person:

Tel:

WASTE TRANSPORTER #2

Name:

Address:

City:

State:

Zip:

Contact Person:

Tel:

XIII. WASTE DISPOSAL SITE

Name:

Location:

City:

State:

Zip:

Tel:

XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW:

Name:

Title:

Authority:

Date of Order (MM/DD/YY):

Date Ordered to Begin (MM/DD/YY):

XV. FOR EMERGENCY RENOVATIONS:

Date and Hour of Emergency (MM/DD/YY):

Description of the sudden unexpected event:

Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden:

XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER:

stop - Demolition - notify owner - Sample Air -
control area & cleanup all

XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR) PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION, AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.

(Signature of Owner/Operator)

(Date)

XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

(Signature of Owner/Operator)

(Date):

NOTIFICATION OF DEMOLITION AND RENOVATION

Operator Project #	Postmark	Date Received	Notification #	
I. TYPE OF NOTIFICATION (O-Original R-Revised C-Cancelled) O				
II. FACILITY INFORMATION (Identify owner, removal contractor, and other operator)				
OWNER NAME: <u>BUNKER Limited Partnership</u>				
Address: <u>135 E. Cameron Ave</u>				
City: <u>Kellogg</u>	State: <u>Id.</u>	Zip: <u>83837</u>		
Contact: <u>Frank Bridt</u>	Tel: <u>208-783-1200</u>			
REMOVAL CONTRACTOR: <u>Specialty Asbestos</u>				
Address: <u>11616 E. Montgomery</u>				
City: <u>S. Pokane</u>	State: <u>wa</u>	Zip: <u>99206</u>		
Contact: <u>Jesse Mask-Vic M-shar</u>	Tel: <u>509-921-9395</u>			
OTHER OPERATOR: <u>Rust Remedial Services Inc. (Gen. Con.)</u>				
Address: <u>4245 Technology</u>				
City: <u>Fremont</u>	State: <u>CA</u>	Zip: <u>94538</u>		
Contact: <u>Jim Bushnell</u>	Tel: <u>510-770-0675</u>			
III. TYPE OF OPERATION (D-Demo O-Ordered Demo R-Renovation E-Emer. Renovation) D				
IV. IS ASBESTOS PRESENT? (Yes/No) Yes				
V. FACILITY DESCRIPTION (Include building name, number and floor or room number)				
Bldg. Name: <u>Power House</u>				
Address: <u>McKinley Ave</u>				
City: <u>Kellogg</u>	State: <u>Id.</u>	County: <u>Shoshone</u>		
Site Location: <u>McKinley Ave</u>				
Building Size: <u>10,000 Ft.²</u>	# of Floors: <u>2</u>	Age in Years: <u>50</u>		
Present Use: <u>Abandoned</u>	Prior Use: <u>Power Distribution</u>			
VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:				
<u>Visual inspection & PLM - Bulk sampling</u>				
VII. APPROXIMATE AMOUNT OF ASBESTOS INCLUDING:				
1. Regulated ACM to be Removed 2. Category I ACM Not Removed 3. Category II ACM Not Removed	RACM To Be Removed	Nonfriable Asbestos Material Not To Be Removed		Indicate Unit of Measurement Below
		Category I	Category II	UNIT
Pipes	700			Ln Ft: <u>X</u> Ln M:
Surface Area		24,000		Sq Ft: <u>X</u> Sq M:
Vol RACM Off Facility Component				Cu Ft: Cu M:
VIII. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) Start: <u>10-03-94</u>		Complete: <u>11-19-94</u>		
IX. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) Start: <u>10-03-94</u>		Complete: <u>11-19-94</u>		

X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:

Piping cut & wrap w/ GLOVE bags - ~~nots~~ ~~envelope~~ ~~disposal~~
 Roofing - Hand removal - ~~cutting~~ a Roofing Hand Removal

XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION OR RENOVATION SITE:

wetted Material, Glovebags Enclosed Areas
 ALL removal by Hand methods

XII. WASTE TRANSPORTER #1

Specialty Asbestos

Name:

Address:

City:

State:

Zip:

Contact Person:

Tel:

WASTE TRANSPORTER #2

Name:

Address:

City:

State:

Zip:

Contact Person:

Tel:

XIII. WASTE DISPOSAL SITE

Name:

Location:

City:

State:

Zip:

Tel:

XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW:

Name:

Title:

Authority:

Date of Order (MM/DD/YY):

Date Ordered to Begin (MM/DD/YY):

XV. FOR EMERGENCY RENOVATIONS:

Date and Hour of Emergency (MM/DD/YY):

Description of the sudden unexpected event:

Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden:

XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBOLED, PULVERIZED, OR REDUCED TO POWDER:

stop Demolition - notify owner - Sample Air -
 control area & cleanup spill

XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR) PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION, AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.

(Signature of Owner/Operator)

(Date)

XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

(Signature of Owner/Operator)

(Date)